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FINAL RESOURCE CONSERVATION AND RECOVERY ACT CORRECTIVE MEASURE STUDY REPORT FOR SOLID WASTE MANAGMENT UNIT 16 (SWMU 16) CAST HIGH EXPLOSIVES FILL/B146 INCINERATOR NSA CRANE IN

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TETRA TECH

Final
Resource Conservation and Recovery Act
Corrective Measure Study Report for SWMU 16 – Cast High Explosives Fill/ Building 146 Incinerator

Naval Support Activity Crane
Crane, Indiana

Naval Facilities Engineering Command
Mid-Atlantic

Contract Number N62470-08-D-1001
Contract Task Order F27R

January 2016

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FINAL

RESOURCE CONSERVATION AND RECOVERY ACT
CORRECTIVE MEASURE STUDY REPORT
FOR
SWMU 16 – CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR

NAVAL SUPPORT ACTIVITY CRANE
CRANE, INDIANA

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

Submitted to:
Naval Facilities Engineering Command Mid-Atlantic
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Norfolk, Virginia 23511-3095

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TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

TABLES

FIGURES

ACRONYMS AND ABBREVIATIONS

µg/kg	Microgram per kilogram
µg/L	Microgram per liter
µg/m^3	Microgram per cubic meter
amsl	Above mean sea level
AVS	Acid volatile sulfide
bgs	Below ground surface
BRAC	Base Realignment and Closure
B146	Building 146
CAAA	Crane Army Ammunition Activity
CAO	Corrective Action Objective
CLEAN	Comprehensive Long-Term Environmental Action Navy
CMIP	Corrective Measure Implementation Plan
CMS	Corrective Measure Study
COC	Chemical of concern
CSM	Conceptual site model
CTO	Contract Task Order
DCE	Dichloroethene
DNAPL	Dense non-aqueous-phase liquid
EMR	Environmental Monitoring Report
EP	Extraction Procedure
ERP	Environmental Restoration Program
HBX	High blast explosive
HMX	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine
IAS	Initial Assessment Study
IDEM	Indiana Department of Environmental Management
IM	Interim Measure
IMR	Interim Measure Report
IMWP	Interim Measure Work Plan
LUC	Land use control
LUCIP	Land Use Control Implementation Plan
LTM	Long-term monitoring
MCL	Maximum Contaminant Level
MCS	Media cleanup standard
mg/kg	Milligram per kilogram
MNA	Monitored Natural Attenuation

NAD	Naval Ammunition Depot
NIRIS	Naval Installation Restoration Information Solution
NPW	Net present worth
NSA	Naval Support Activity
NSWC	Naval Surface Warfare Center
NTU	Nephelometric turbidity unit
O&M	Operation and Maintenance
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
PCE	Tetrachloroethene
Plz	Lower Pennsylvanian water-bearing zone
Pmz	Middle Pennsylvanian water-bearing zone
PR/VSI	Preliminary Review/Visual Site Inspection
Puz	Upper Pennsylvanian water-bearing zone
QAPP	Quality Assurance Project Plan
RCRA	Resource Conservation and Recovery Act
RDX	Hexahydro-1,3,5-trinitro-1,3,5-triazine
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
SAP	Sampling and Analysis Plan
SEM	Simultaneously extracted metals
SERA	Screening-level ecological risk assessment
SVOC	Semivolatile organic compound
SWMU	Solid Waste Management Unit
TCA	Trichloroethane
TCE	Trichloroethene
TNT	Trinitrotoluene
TSCA	Toxic Substances Control Act
TSDF	Treatment, storage, or disposal facility
USEPA	United States Environmental Protection Agency
UST	Underground storage tank
VI	Vapor intrusion
VIM	Voluntary Interim Measure
VOC	Volatile organic compound
WQS	Water Quality Standard

1.0 INTRODUCTION

This Resource Conservation and Recovery Act (RCRA) Corrective Measure Study (CMS) Report was prepared for the Cast High Explosives Fill/Building 146 (B146) Incinerator at the Naval Support Activity (NSA) Crane facility located in Crane, Indiana. The Cast High Explosives Fill/B146 Incinerator is also known as Solid Waste Management Unit (SWMU) 16 and is identified in Attachment 0 of the Indiana State RCRA Hazardous Waste Management Permit for the facility (IN5170023498) as SWMU 16/16 (IDEM, 2013). Tetra Tech, Inc., prepared this CMS Report under Contract Task Order (CTO) F27R of Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract No. N62470-08-D-1001.

1.1 SCOPE AND OBJECTIVES OF THE CORRECTIVE MEASURE STUDY

Indiana Department of Environmental Management (IDEM) is the lead regulatory agency for RCRA corrective actions at SWMU 16. This CMS Report was prepared to meet the requirements of the Indiana State RCRA Hazardous Waste Management Permit for NSA Crane (IN5170023498), which went into effect on October 18, 2001. The corrective action requirements for SWMU 16 are being addressed as part of the Navy Environmental Restoration Program (ERP), which is designed to identify contamination from past operations at Navy and Marine Corps lands and facilities and to institute corrective measures as needed.

The purpose of a CMS is to develop and evaluate corrective action alternatives and to recommend the corrective measure(s) to be taken at the site. The RCRA Permit, Attachment 0, Tasks 6 to 8 and 9B address general requirements for a CMS. Tasks include identification and development of the corrective measure alternative(s) (Task 6), evaluation of the corrective measure alternative(s) (Task 7), and justification and recommendation of the corrective measure(s) (Task 8) for the site. The results of the evaluation and recommendation based on the results are provided in a CMS Report (Task 9B) for the site. Specific objectives of a CMS include the following:

- Identify Corrective Action Objectives (CAOs).
- Identify media cleanup standards (MCSs) for the site chemicals of concern (COCs) that are protective of human receptors and the environment based on the CAOs.
- Develop and evaluate corrective measure alternatives that satisfy the CAOs by protecting human receptors and the environment.
- Recommend a corrective measure alternative.

1.2 PURPOSE OF THE CORRECTIVE MEASURE STUDY REPORT FOR SWMU 16

This CMS Report was prepared to provide the results of the CMS for SWMU 16 to identify and recommend corrective measures for soil contamination under B146 and groundwater contamination at SWMU 16.

As discussed further in Section 1.5.2, past explosives fill, pressure washout, and incineration operations at the site resulted in releases of explosives, chlorinated solvents, and metals. Closure of the incinerators, two Volunteer Interim Measures (VIMs) in the 1990s, and an Interim Measure (IM) in 2013 to 2014 removed the sources of contamination outside of the B146 footprint. As discussed further in Section 2.0, based on the results of the RCRA Facility Investigation (RFI) (Tetra Tech, March 2011), Monitored Natural Attenuation (MNA) Study Report (Tetra Tech, July 2010), IM Report (IMR) (Tetra Tech, September 2014), and two vapor intrusion (VI) studies (Tetra Tech, March 2011 and November 2014), potential unacceptable risks remain at SWMU 16 that can be addressed by the alternatives developed and evaluated in this CMS Report. Trichloroethene (TCE) concentrations in soil under the concrete foundation of B146 are greater than acceptable levels for potential migration to groundwater (based on drinking water exposure) and is a potential concern if TCE migrates to groundwater and site groundwater is used for drinking. Under the current land use at SWMU 16, TCE concentrations in soil gas under the concrete foundation of B146 could pose potential unacceptable indoor air risks to workers inside B146 if the B146 foundation is compromised. Based on chlorinated volatile organic compound (VOC) concentrations in groundwater and soil gas at the site, VI could present a future unacceptable indoor air risks to occupants of any future constructed or modified buildings at SWMU 16. Chlorinated VOC and explosives concentrations in groundwater at the site are a potential future concern if site groundwater is used for drinking and if groundwater concentrations increase such that discharge to surface water results in future unacceptable risks to ecological and human receptors of Turkey Creek. Potential unacceptable ecological risks associated with exposure to metals in soil that were identified in the SWMU 16 RFI Report (Tetra Tech, March 2011) were addressed as part of the 2013 to 2014 IM.

Based on the potential unacceptable risks for SWMU 16 and the following considerations, the evaluation of technologies and alternatives for addressing contamination at SWMU 16 focuses on long-term management [i.e., monitoring and land use controls (LUCs)] rather than active treatment of soil and groundwater:

- NSA Crane is a fenced military installation controlled by the Navy. NSA Crane was not included in the 2005 (most recent) Base Realignment and Closure (BRAC) process and will remain a military installation for the foreseeable future.

- Current and anticipated future land uses at the site are military (i.e., industrial). Residential land use occurs only in very limited areas of the facility, none of which are located within or adjacent to SWMU 16.

- Operations and sources of contaminant releases have been discontinued and/or removed, and IMs were conducted to remove accessible soil contamination at SWMU 16. Contaminated soil could not be removed from under B146 because excavation activities would disturb mission-critical activities conducted in the building.

- The building structure and foundation isolate contaminated soil under B146 from the environment; therefore, residual soil contamination under the concrete foundation of B146 is not accessible and is not a source for migration to groundwater or to indoor air as long as the concrete foundation is intact. As discussed further in Sections 2.3 and 2.4, alternative development considered the potential that soil will be accessible in the future when mission-critical activities are no longer required at B146. At that time, the Navy would determine whether additional action may be warranted for SWMU 16.

- Unique topography, geology, and hydrogeology prevent contaminated groundwater in bedrock at the site from migrating beyond surface water drainages near the boundary of SWMU 16; therefore, the extent of contaminated groundwater at the site is currently stable. Based on the existing data, risks are acceptable for downgradient surface water and sediment; therefore, an adverse impact from current groundwater migration to surface water drainages has not been identified. Although site groundwater has not adversely impacted downgradient surface water (i.e., Turkey Creek), alternatives in the CMS Report consider appropriate measures to ensure that surface water is not adversely impacted by SWMU 16 contamination in the future.

1.3 ORGANIZATION OF THE CORRECTIVE MEASURE STUDY REPORT

This CMS Report consists of four sections. Section 1.0 is this introduction. Section 2.0 provides the results of identification and development of corrective measure alternatives and includes a description of current conditions based on previous investigations, IMs, and the conceptual site model (CSM); develops CAOs, including specifying the MCSs for SWMU 16; and screening results of corrective measure technologies and identification of corrective measure alternatives developed for SWMU 16. Section 3.0 provides an evaluation of each corrective measure alternative, and Section 4.0 provides a comparative analysis of alternatives and justification and recommendation for corrective measures at SWMU 16. Appendix A provides supporting information, including database print outs for VOC, explosives, and groundwater characteristics data, and Appendix B provides the calculations and cost estimates for the corrective measure alternatives.

1.4 FACILITY BACKGROUND INFORMATION

1.4.1 Facility Location

NSA Crane encompasses 62,463 acres (approximately 98 square miles) in the southern portion of Indiana, approximately 75 miles southwest of Indianapolis, Indiana, and 71 miles northwest of Louisville, Kentucky, immediately east of Crane Village and Burns City (Figure 1-1). Most of the NSA Crane facility is located in the northern portion of Martin County, and smaller portions are located in Greene, Daviess, and Lawrence Counties. NSA Crane is located in a rural sparsely populated area. Most of NSA Crane is forested, and the surrounding area is wooded or farmed land.

NSA Crane provides support for Navy equipment, shipboard weapons systems, and ordnance. In addition, NSA Crane supports the Crane Army Ammunition Activity (CAAA) with production, renovation, storage, shipment, demilitarization, and disposal of conventional ammunition.

1.4.2 Facility History

This subsection provides general information on the history of NSA Crane and its activities.

1.4.2.1 History of Ownership and Operation

In 1940, Congress authorized construction of a Naval Ammunition Depot (NAD) in southern Indiana, and NAD Burns City was commissioned in 1941. In 1943, NAD Burns City was renamed NAD Crane, and the Town of Crane was built to house the rapidly growing number of civil service employees. The overall mission of NAD Crane was to load, prepare, renovate, receive, store, and issue ammunition to the fleet.

During World War II, the mission of NAD Crane was expanded to include pyrotechnics production, mine filling, rocket assembly, field storage, torpedo storage, and ordnance spare parts and mobile equipment storage. During the 1950s, several new departments were created. The Ammunition Loading and Production Engineering Center was transferred to NAD Crane, and the Central Ammunition Supply Control Office was established. NAD Crane supplied ammunition to the fleet during the Korean and Vietnam Conflicts. During the Vietnam Conflict, the number of full-time employees at NAD Crane increased to 6,800.

In 1975, NAD Crane was redesignated Naval Weapons Support Center Crane. Its new mission was to provide support for ships, aircraft, equipment, shipboard weapons systems, and assigned ordnance items and to perform additional functions as directed.

In 1977, the Single Manager Concept was implemented, the CAAA was created, and the Army assumed ordnance production, storage, and related responsibilities as a tenant organization at Naval Weapons Support Center Crane. Other functions remained under Navy control. In 1992, the facility was redesignated Naval Surface Warfare Center (NSWC) Crane. Under a new command structure of the Navy Region Midwest (now Mid-Atlantic), NSA Crane was established. CAAA and NSWC Crane are two of the tenant commands located at NSA Crane.

NSA Crane’s more than 4,000 civilian and contractor employees provide comprehensive support for complex military systems spanning development, deployment, and sustainment in three mission areas, Electronic Warfare/Information Operations, Special Missions, and Strategic Missions. The Navy currently retains ownership of all real estate and facilities at NSA Crane. Responsibility for overall safety, security, and environmental protection remains with the Commanding Officer, NSA Crane.

1.4.2.2 History of Regulatory Actions

Following promulgation of the United States Environmental Protection Agency’s (USEPA’s) RCRA hazardous waste regulatory program, NSWC Crane filed notification and application in October 1980 to operate as a RCRA hazardous waste treatment, storage, or disposal facility (TSDF). Interim status was granted subject to the operating requirements and applicable technical standards in Title 40 of the Code of Federal Regulations, Part 265.

Corrective action programs established as part of the 1984 RCRA Hazardous and Solid Waste Amendments required NSWC Crane to address past releases of hazardous waste or hazardous constituents at SWMUs. Accordingly, NSWC Crane submitted a Hazardous Waste Management Report, and a RCRA Facility Assessment (RFA) was conducted to characterize the potential for releases of hazardous wastes or constituents from approximately 100 SWMUs identified during the RFA.

In December 1989, USEPA issued the federal portion of the Final RCRA Part B permit for NSWC Crane to the Navy. USEPA and IDEM renewed the RCRA Part B permit in 1995, and modifications have been made as necessary with the approval of IDEM, who now has responsibility for the Federal Corrective Action Program.

1.5 SWMU 16 BACKGROUND INFORMATION

This subsection provides a summary of background information for SWMU 16. Additional details are provided in the RFI Report (Tetra Tech, March 2011), SWMU 16 IM Work Plan (IMWP) (Tetra Tech, August 2013), and SWMU 16 IMR (Tetra Tech, September 2014).

1.5.1 Site Description

SWMU 16 is in the north-central portion of NSA Crane, southeast of Highway 45 (Figures 1-1 and 1-2). The general operational area associated with past SWMU 16 activities is approximately 16 acres and includes the fenced area around B146, former setting tanks, former underground storage tank (UST), and former ash pile and impacted areas south of the incinerator bays (see Figures 1-2 and 1-3). The SWMU 16 boundary includes a portion of the B146 fenced area and the potential drainage area for groundwater from the SWMU 16 operational area (Figure 1-2). The largest building at SWMU 16, B146, is located in the north-central portion of the SWMU and covers approximately two-thirds of an acre. Other buildings, gravel parking lots, and paved roads that allow access to the buildings are located in the B146 area. Facilities around B146 include case filling, case preparation, lunch and locker, and sewage pumping station buildings to the north, fuse and detonator magazines to the south, and magazine and storage buildings to the east. Most grassy areas are located east and southeast of B146. Most of the SWMU area surrounding B146 is heavily forested.

Protected bird species that may use SWMU 16 as part of their home ranges include the bald eagle, osprey, sharp-shinned hawk, red-shouldered hawk, broad-winged hawk, black and white warbler, hooded warbler, and the worm-eating warbler. Also, the Indiana bat, a Federal endangered species is known to forage at NSA Crane. During the spring and summer, Indiana bats roost in trees and forage for insects primarily in riparian and upland forests.

1.5.2 Site History

B146, constructed in 1943, was an explosives filling (cast loading) and pressure washout facility and later included three oil-fired rotary kiln incinerators and associated aboveground No. 2 fuel oil tanks. Cast loading involved melt pouring of 2,4,6-trinitrotoluene (TNT), hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX), and high blast explosive (HBX) (a family of binary explosives composed of RDX, TNT, powdered aluminum, and wax) into projectiles. Operations included preparation of munitions casings for explosives filling and use of a TCE degreaser. Other operations included demilitarization and incineration of ammunition (small caliber ammunition, shotgun shells, fuses, detonators, boosters, tracers, flare candles, and smoke flares) and demilitarization and high-pressure washout of projectiles. Steam out of Army ammunition and rockets containing TNT and Composition B (RDX, TNT, and wax) was reportedly conducted between 1954 and 1956.

Beginning in approximately 1967, the incinerators, located in concrete bays, were used to demilitarize munitions through burning or detonation. Munitions placed in the incinerators were exposed to flame combustion, which resulted in destruction of the energetics (explosives, propellants, and pyrotechnics) contained within the munitions. Initially, ash and slag residues were piled on the ground south of the incinerators. Later, ash and other incineration residues were collected and transferred to the NSWC Crane hazardous waste storage facility prior to off-site disposal. Use of the incinerators was discontinued in 1987, a closure plan was prepared in 1989, and the incinerators were closed in the early 1990s (Halliburton NUS, November 1992 and Tetra Tech, March 2011). The ash/slag piles were removed as part of incinerator closure. Soil contaminated with ash and slag were excavated as part of a VIM conducted in 1995 and 1996 (Morrison Knudson Corporation, February 1997), and remaining metals-contaminated soil associated with ash and slag piles was removed as part of the IM conducted in 2013 and 2014. The fuel oil tanks and visually impacted soil under the tanks were removed as part of the 1995 to 1996 VIM. Therefore, the incinerators, fuel oil tanks, ash/slag piles, and contaminated soil associated with incineration activities have been removed from SWMU 16.

Prior to 1978, wastewater from site operations was discharged through storm drains to ditches and local surface water bodies. After 1978, wastewater was transported to the CAAA Rockeye Treatment Facility for treatment. Additionally, until the mid-1990s, B146 floor drains and building downspouts discharged to two settling tanks (also referred to as sumps or settling basins in various site documents) located on the eastern and western sides of B146. The settling tanks were made of concrete with wooden covers and drained through clay (terra cotta) tile pipes into drainage ditches in the woods. As part the 1995 to 1996 VIM, the settling tanks were cleaned; however, water containing high levels of TCE was found entering the settling tanks. A subsequent VIM was conducted from 1996 to 1998 to prevent water from continuing to enter the settling tanks. As part of these activities, the pipe from the downspouts to the setting tanks, the inlet to and outlet of the terra cotta pipes exiting the settling tanks, and existing floor drains in B146 were sealed. Building downspouts were rerouted to drain to the hillsides east and west of B146. TCE-contaminated water entering the settling tanks was treated until concentrations were low enough to directly route water entering the settling tanks to the sanitary sewer system (Morrison Knudson Corporation, December 1999). A third settling tank was installed in 1974 to the north of B146 that received hotwell waters and discharged to the sanitary sewer system. The three settling tanks and UST north of B146 were removed as part of 2013 to 2014 IM activities (Tetra Tech, September 2014). Piping from the former floor drains to the former settling tanks apparently remains in place, except where such piping was encountered (and removed) in the excavation areas included in 2013 to 2014 IM activities (see Figure 1-4).

SWMU 16 is currently used for renovation, rework, and breakdown of munitions and ammunition demilitarization operations. The current operations are not under a RCRA permit.

1.5.3 Topography and Surface Drainage

Just north of SWMU 16, Highway 45 runs in a northeast-southwest direction along a ridge top that is also a drainage divide. B146 is located on a relatively flat area on the top of the ridge, with elevations ranging from approximately 760 to 766 feet above mean sea level (amsl). Elevations decrease to the east, south, and west of the building area at slopes of 18 to 20 percent. Surface drainage from the site is routed via drainage ditches and culverts to intermittent streams that discharge to Turkey Creek. Turkey Creek flows from northeast to southwest and is located east of SWMU 16. Figure 1-3 shows the topographic contours and locations of surface drainages around the site and Turkey Creek.

The eastern portion of the B146 area drains into drainage ditches that flow to the east and then to the southeast. These drainage ditches discharge to Turkey Creek at locations approximately 1,500 feet east and 1,500 feet southeast of B146. The western portion of the area drains into drainage ditches that flow to the west for approximately 500 feet where they enter an intermittent stream. The intermittent stream flows to the south and then to the southeast before it discharges to Turkey Creek approximately 2,000 feet south-southeast of B146. The elevation of Turkey Creek is approximately 575 feet amsl. The drainage ditches and drainage channels to Turkey Creek are usually dry and are typically only wet during and immediately after rainfall. Turkey Creek has more frequent occurrences of flowing water; however the section of Turkey Creek near SWMU 16 is dry for a significant portion of the year.

1.5.4 Site Geology and Soil

Natural unconsolidated materials at the top and sides of the ridge are residual soils formed from weathering of the underlying bedrock. The residual soils are predominantly fine-grained materials including varying amounts of clay, silt, and sand. The maximum observed overburden thickness was approximately 13 feet on the top of the ridge. Elsewhere, residual soils were generally less than 10 feet thick.

The soils are underlain by Pennsylvanian-age bedrock that consists of discontinuous layers of siltstone, sandstone, shale, and coal seams. Below the Pennsylvanian rock lie Mississippian-age limestone and sandstone formations. Three geologic cross sections (A-A’ to C-C’) were developed during the RFI to illustrate the subsurface materials underlying SWMU 16. Figure 1-5 shows the locations of the generalized geologic cross sections, and the cross sections are presented as Figures 1-6 and 1-7.

A number of shallow, discontinuous, and weathered sandstone layers approximately 5 to 15 feet thick were encountered near the top of the ridge at elevations of approximately 740 to 755 feet amsl. The sandstones are presumably capping the ridge and are resistant to erosion. Groundwater was first encountered in these sandstones, and they are collectively referred to as the Upper Pennsylvanian water-bearing zone (Puz). Shale layers are somewhat continuous and interlayered with the shallow sandstone lenses. A continuous or nearly continuous layer of shale and siltstone, 5 to 10 feet thick, lies beneath the sandstone lenses between elevations of 730 and 740 feet amsl. The shale and siltstone unit is irregular in thickness but appears to be an effective aquitard between the Puz and the slightly deeper, intermediate-depth, sandstone lenses encountered at elevations of approximately 720 to 735 feet amsl. Groundwater was encountered within the sandstone lenses, which are referred to as the Middle Pennsylvanian water-bearing zone (Pmz).

A shale unit was encountered from approximately 675 to 725 feet amsl. The shale is continuous across the site and has a thickness of 35 to 50 feet. Because of its thickness, this shale is acting as an aquitard beneath the Pmz and the underlying interlayered sandstone and siltstone unit that contains a coal seam near the top. This unit is referred to as the Lower Pennsylvanian water-bearing zone (Plz). During the RFI, borings were advanced a maximum of 10 feet into this unit; therefore, it is not possible to determine the thickness and other lithologic properties of this zone at SWMU 16.

The Pennsylvanian bedrock beneath SWMU 16 is estimated to be 122 to 134 feet thick, and the Pennsylvanian/Mississippian unconformity is estimated to be at approximately 630 to 640 feet amsl. This would place the Mississippian rock formations approximately 20 to 30 feet below the deepest monitoring well located on the ridge top (Figures 1-6 and 1-7).

Boreholes advanced southeast of B146 at the base of the ridge near Turkey Creek encountered 1 to 2 feet of shale at the bottoms of the borings. This Mississippian-age shale unit should act as an additional aquitard that prevents migration of groundwater vertically downward through the core of the ridge.

1.5.5 Site Hydrogeology

As discussed above, the Pennsylvania bedrock encountered during SWMU 16 field investigations was divided into three water-bearing zones, Puz, Pmz, and Plz, based on stratigraphy, differences in water-yielding properties, and differences in hydraulic potential. Shale units and occasional siltstone lenses separate the water-bearing zones and appear to act as aquitards.

The Final MNA Report for SWMU 16 (Tetra Tech, July 2010) presents the recorded groundwater elevations for SWMU 16 Puz wells from nine different monitoring rounds from May 2003 through April 2007. Based on these data, most recorded groundwater elevations are below the recorded well-specific elevations for the top of bedrock. During the installation of multiple borings in the overburden at SWMU 16, no groundwater was encountered in those soil borings, indicating that groundwater elevations were below the local bedrock elevations.

Most of the groundwater in the Puz and Pmz flows to the southeast, south, and southwest. Potentiometric surface maps reflecting Round 3 (January 2004) groundwater contours are provided as Figures 1-8 through 1-10 for the Puz, Pmz, and Plz, respectively. Excerpts from the 2010 MNA Report are provided in Appendix A.1 and include a table with the Rounds 1 to 9 groundwater elevations and Round 9 potentiometric surface maps. The Puz and Pmz intercept the land surface (i.e., crop out) along the upper portions of the ridge between elevations of 730 and 760 feet amsl. Groundwater in the Puz and Pmz that reaches the outcrop area is taken up by vegetation and transpired, seeps into drainage ditches at the ground surface, and joins surface water in the ditches and intermittent streams flowing toward Turkey Creek or migrates down the side of the hill along the bedrock/soil interface. A small portion of Pmz groundwater migrates downward through a shale and siltstone aquitard and enters the Plz. Groundwater flow in the portion of the Plz that is monitored flows toward the northeast.

1.5.6 Water Supply

Groundwater at SWMU 16 is not currently used, and there are no plans for its use in the future. Greenwood Lake, an 800-acre lake in the northern portion of NSA Crane (Figure 1-1), is the main source of drinking water at NSA Crane and is expected to remain as such in the future. Greenwood Lake is located approximately 0.5 mile northwest of SWMU 16.

1.5.7 Surrounding Land Use

SWMU 16 is approximately 3 miles south of the nearest NSA Crane property boundary. There are no known or likely future land use changes under consideration or proposed at this time for SWMU 16. SWMU 16 is contained completely within NSA Crane, and likely future surrounding land use is expected to be limited to military/industrial uses.

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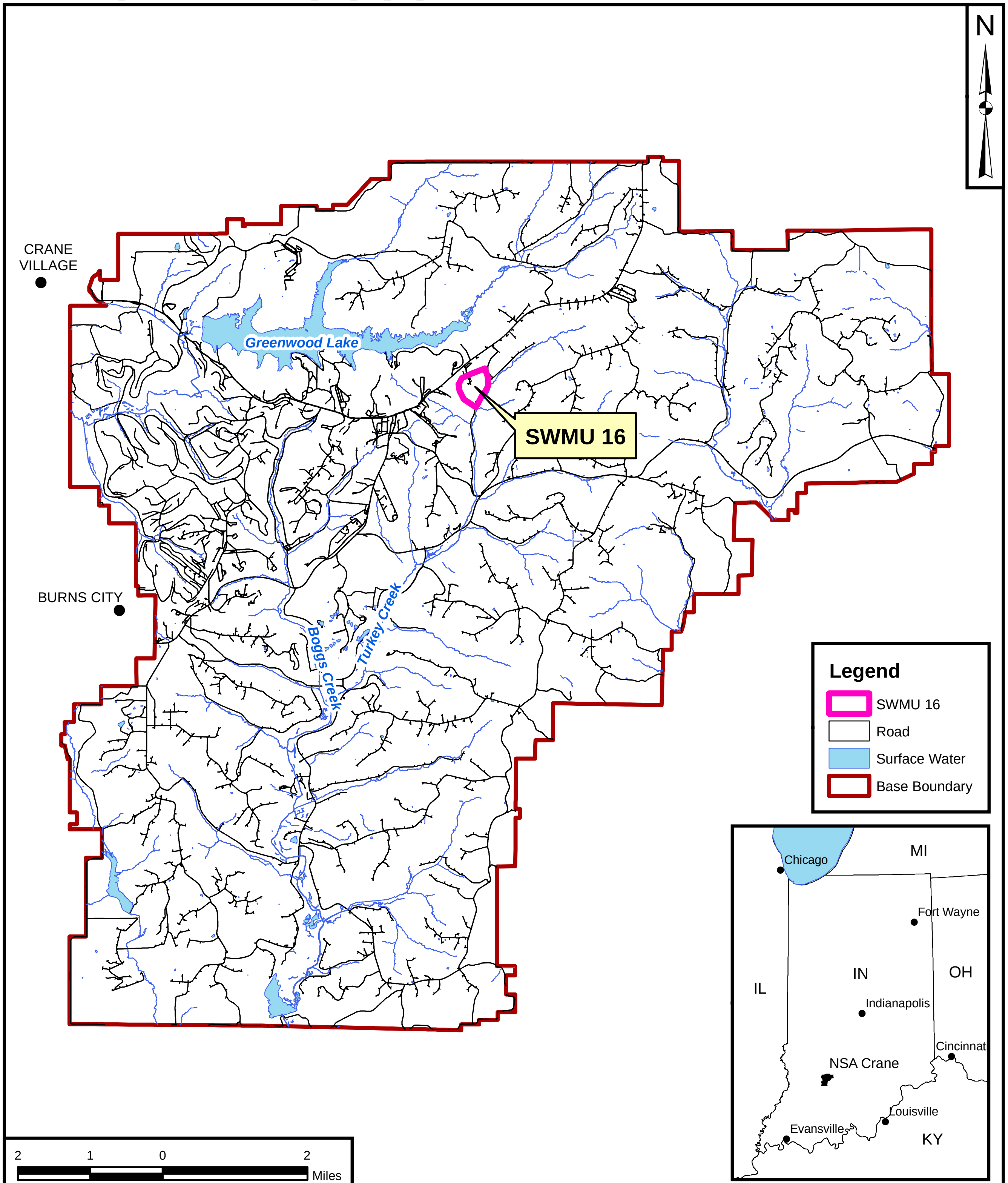

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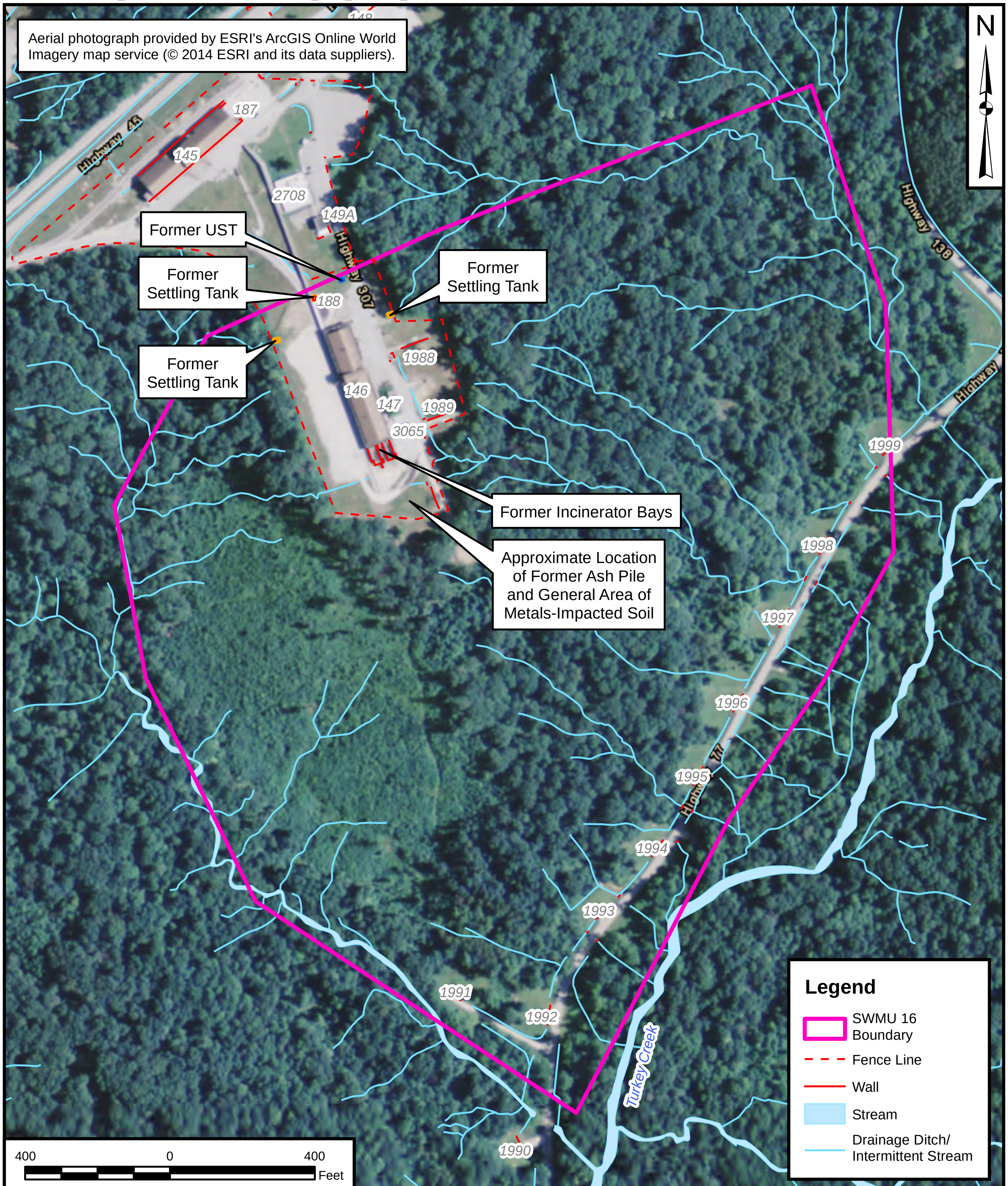

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SITE MAP
SWMU 16 -
CAST HIGH EXPLOSIVES FILL/
BUILDING 146 INCINERATOR
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER F27R	
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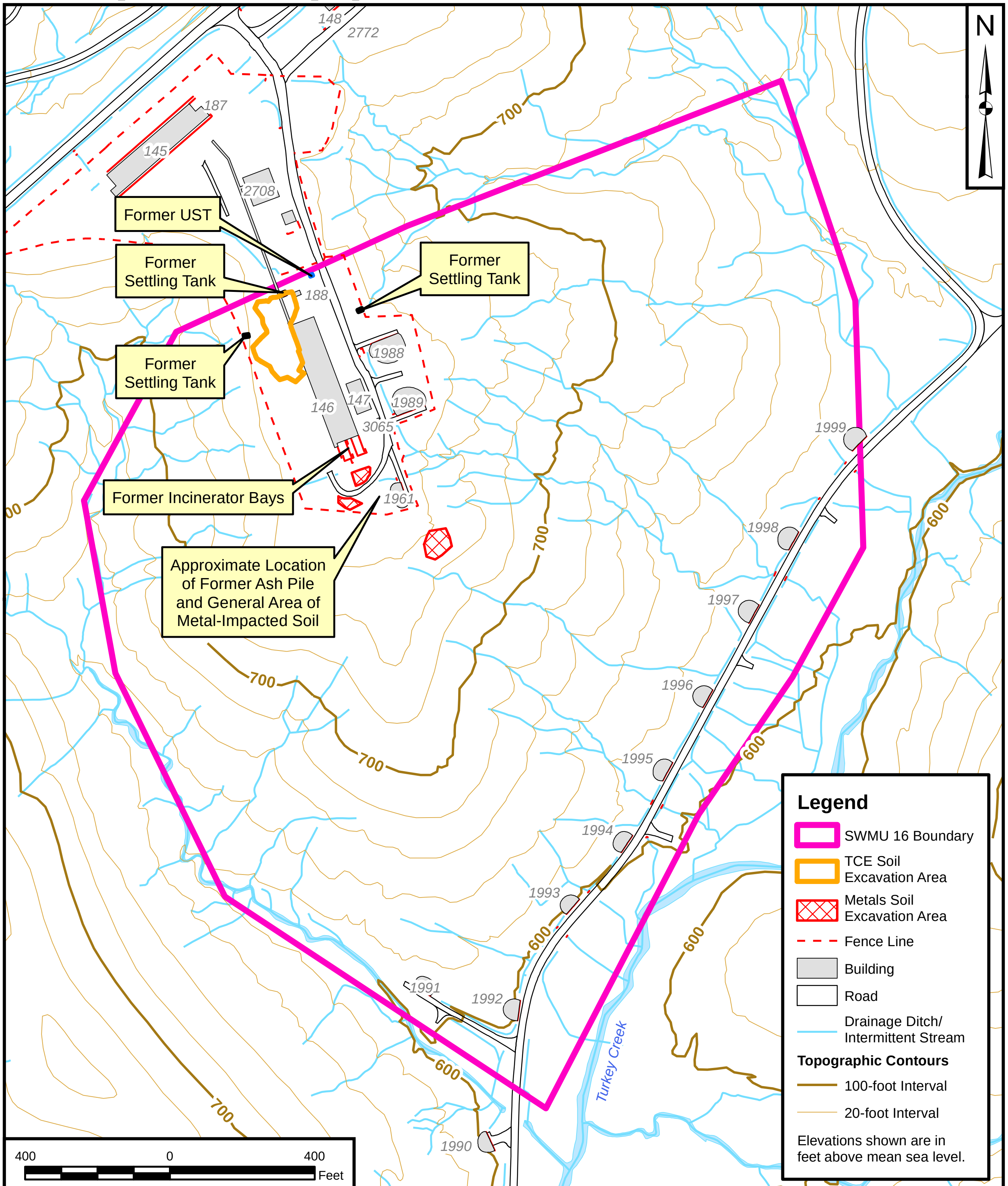

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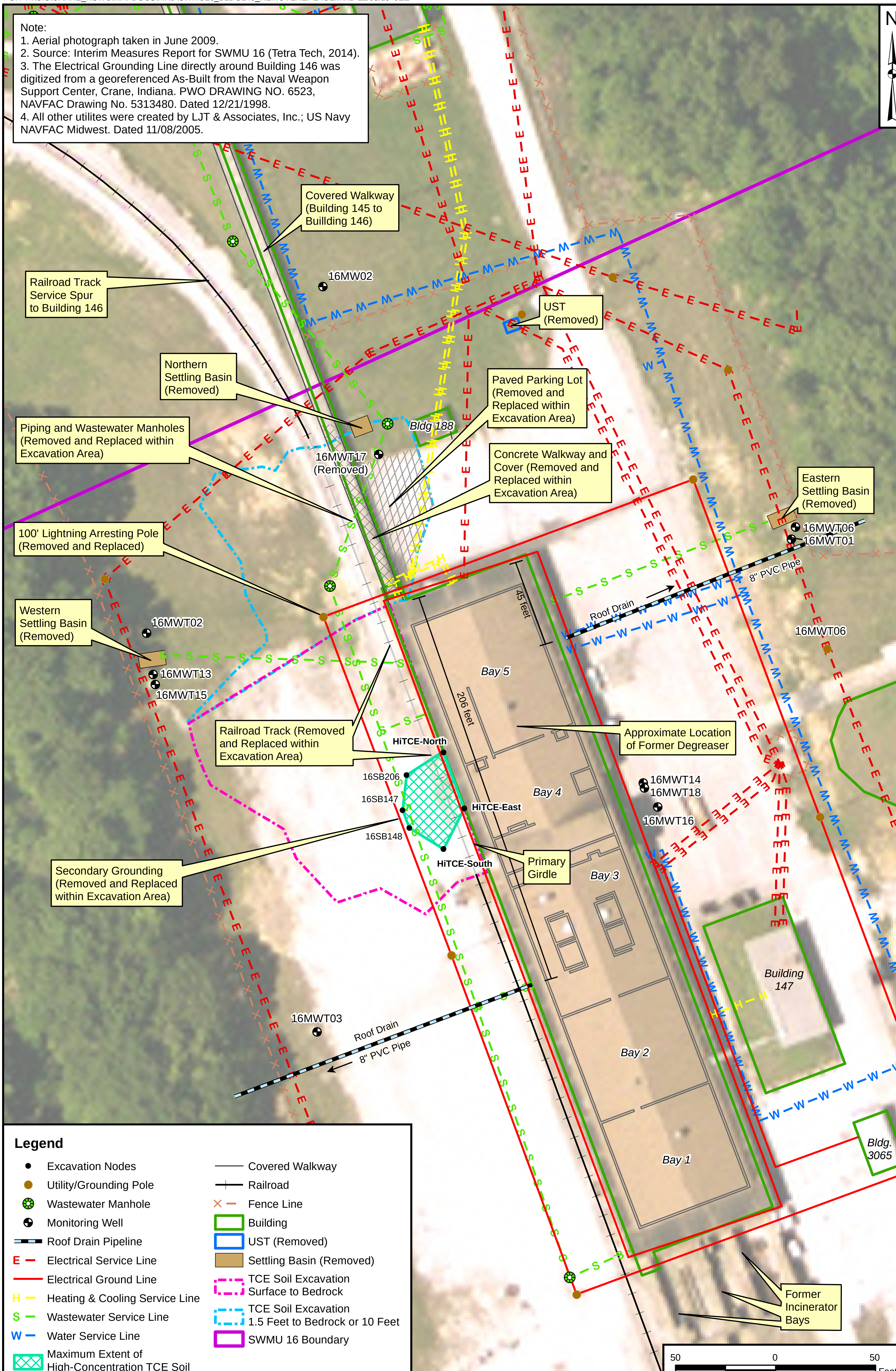

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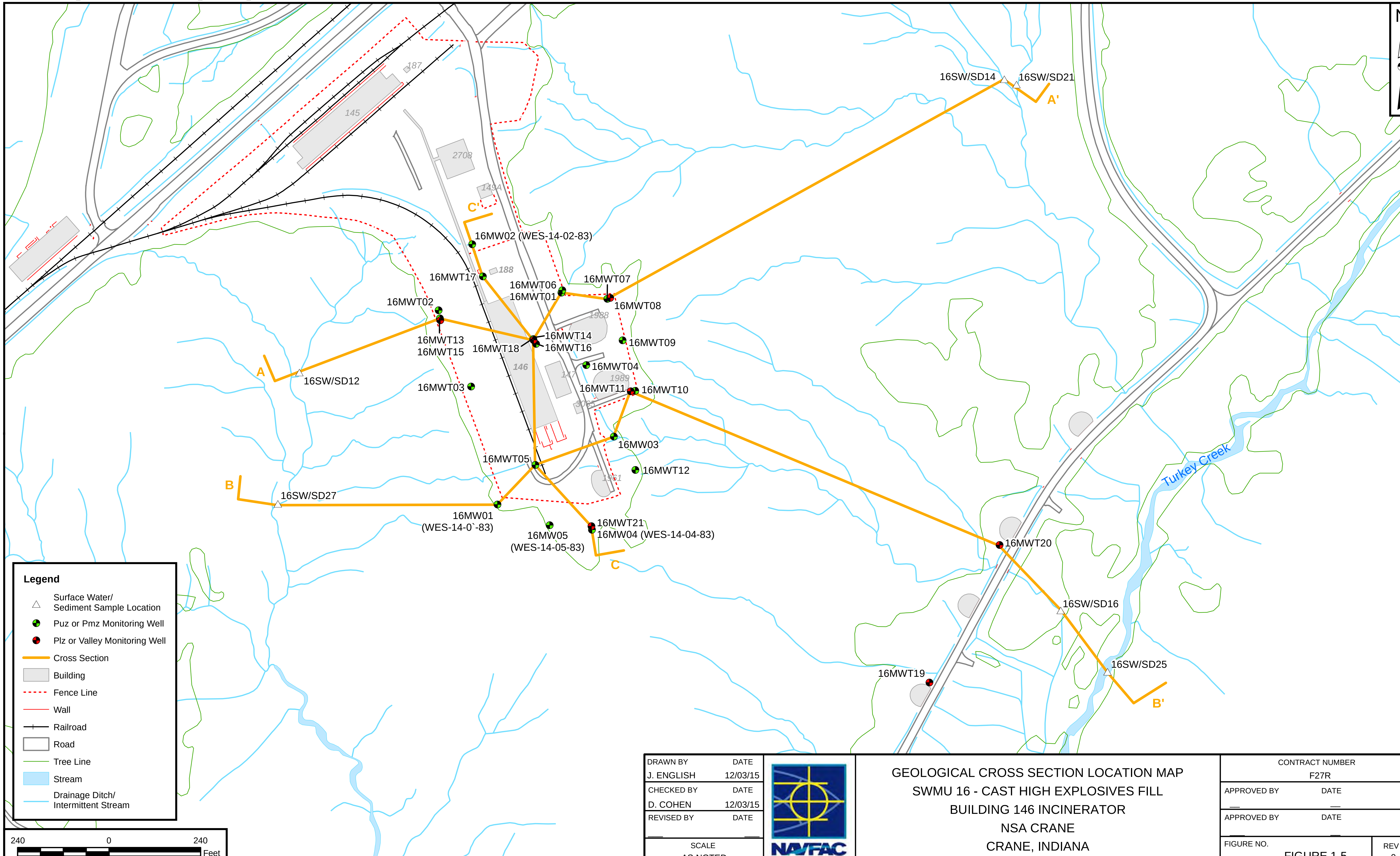
J. ENGLISH	12/03/15
SCALE AS NOTED	

NAVFAC

LAYOUT OF BUILDING 146 AND SURROUNDING AREA
WITH INFRASTRUCTURE REMOVED AND/OR REPLACED
DURING 2013 TO 2014 INTERIM MEASURE
SWMU 16 - CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER	
F27R	
APPROVED BY D. COHEN	DATE 12/03/15
APPROVED BY —	DATE —
FIGURE NO. FIGURE 1-4	REV 0

PGH P:\GIS\CRANE_NSWC\MAPDOCS\MXD\SWMU16_XSECTIONS_ALT.MXD 12/03/15 JEE



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J. ENGLISH	12/03/15
CHECKED BY	DATE
D. COHEN	12/03/15
REVISED BY	DATE
SCALE AS NOTED	

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GEOLOGICAL CROSS SECTION LOCATION MAP
SWMU 16 - CAST HIGH EXPLOSIVES FILL
BUILDING 146 INCINERATOR
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER F27R	
APPROVED BY	DATE
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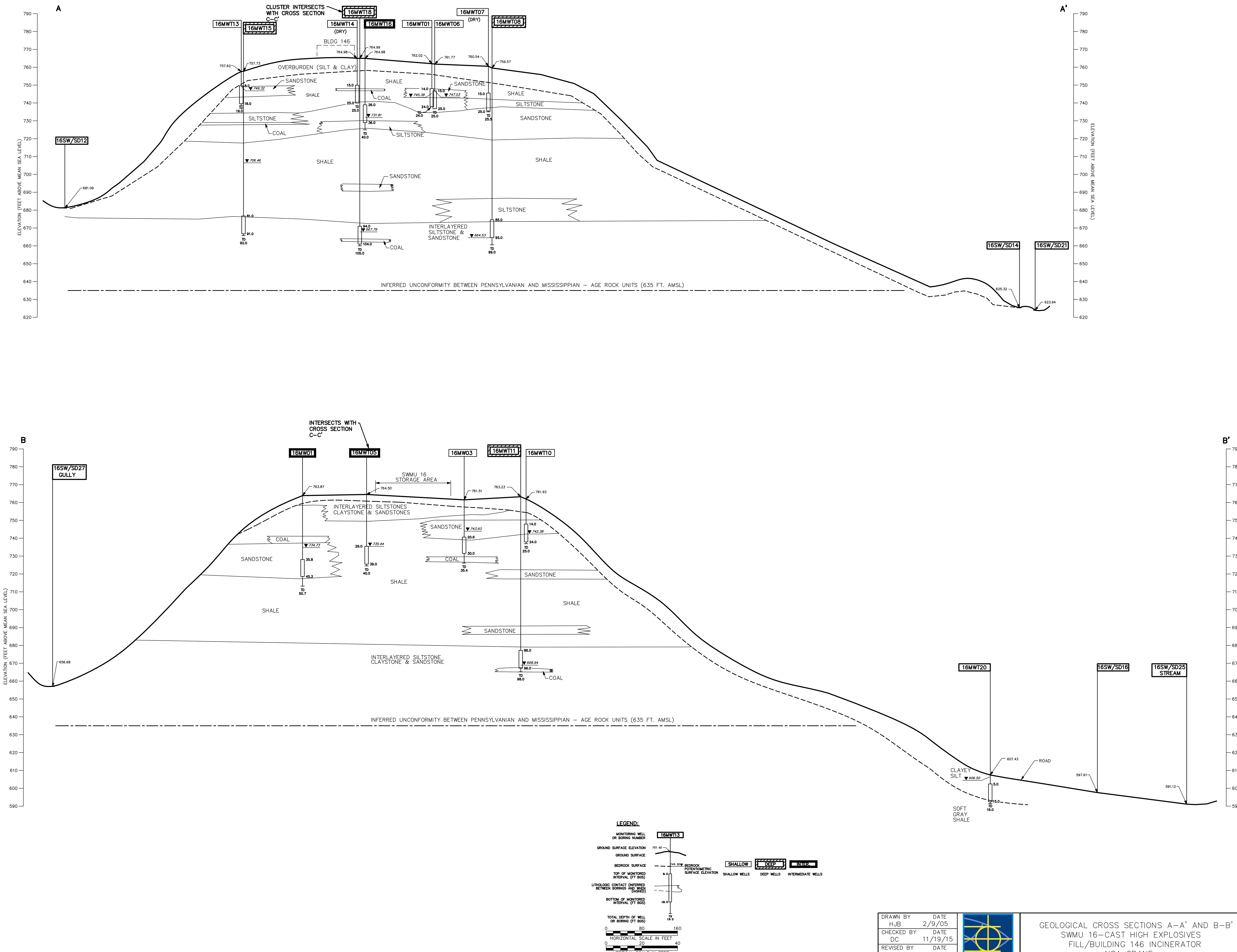
FIGURE NO. FIGURE 1-5	REV 0

DRAWING NO. FIGURE 1-6 REV. 0



SOURCE: CROSS SECTION WAS TAKEN FROM FIGURE 4-5 OF THE RFI REPORT (TETRA TECH, MARCH 2011.)

DRAWN BY HJB	DATE 2/9/05	
CHECKED BY DC	DATE 11/19/15	
REVISED BY CK	DATE 11/19/15	
SCALE AS NOTED		

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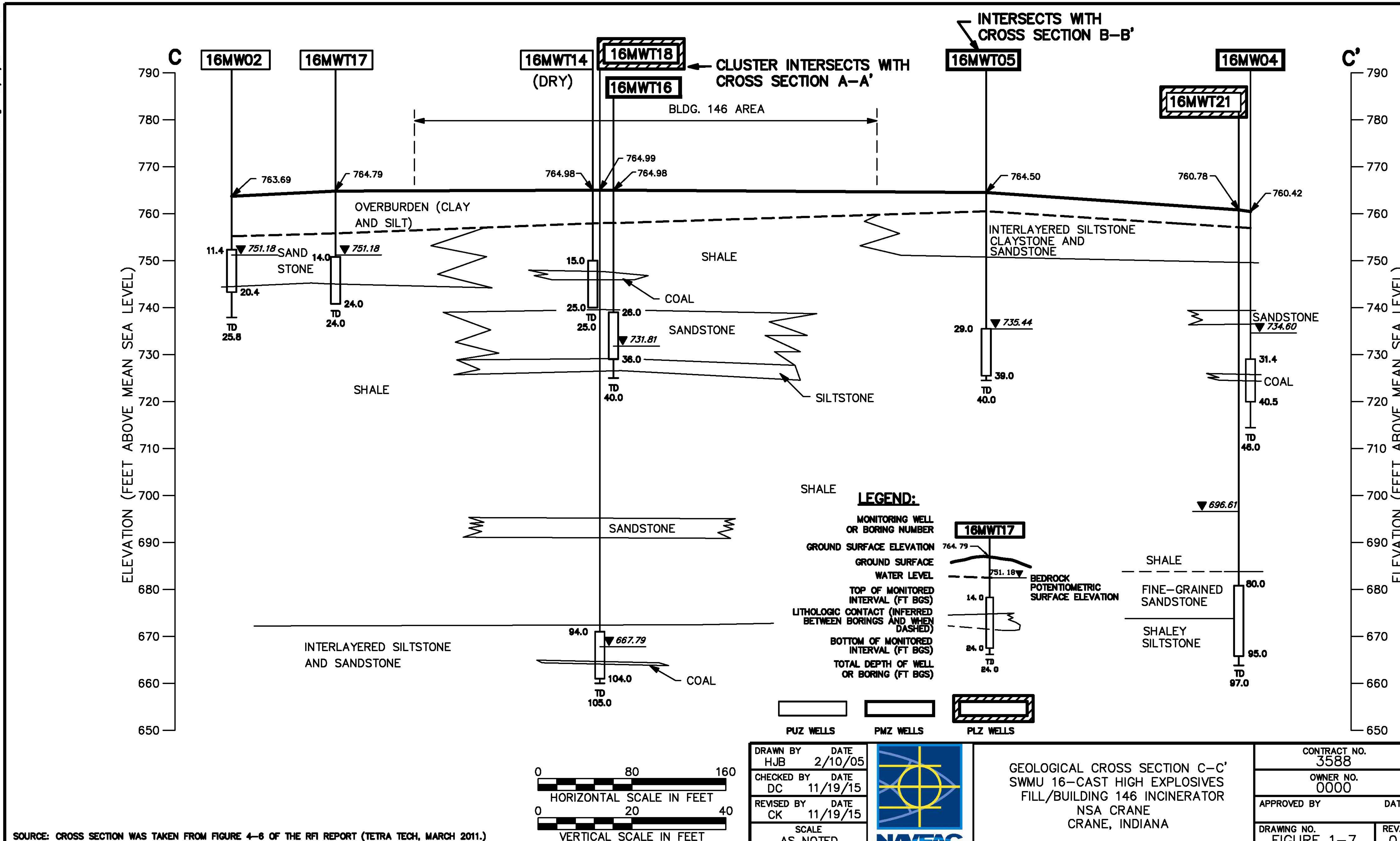
GEOLOGICAL CROSS SECTIONS A-A' AND B-B'
SWMU 16-CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR
NSA CRANE
CRANE, INDIANA

CONTRACT NO. 3588
OWNER NO. 0000
APPROVED BY | DATE
DRAWING NO. FIGURE 1-6 | REV. 0

FORM CADD NO. SDIV-E-STD.DWG - REV 0 - 5/4/98

ACAD: 7448GX10.dwg 02/18/10 CK PIT



SOURCE: CROSS SECTION WAS TAKEN FROM FIGURE 4–6 OF THE RFI REPORT (TETRA TECH, MARCH 2011.)

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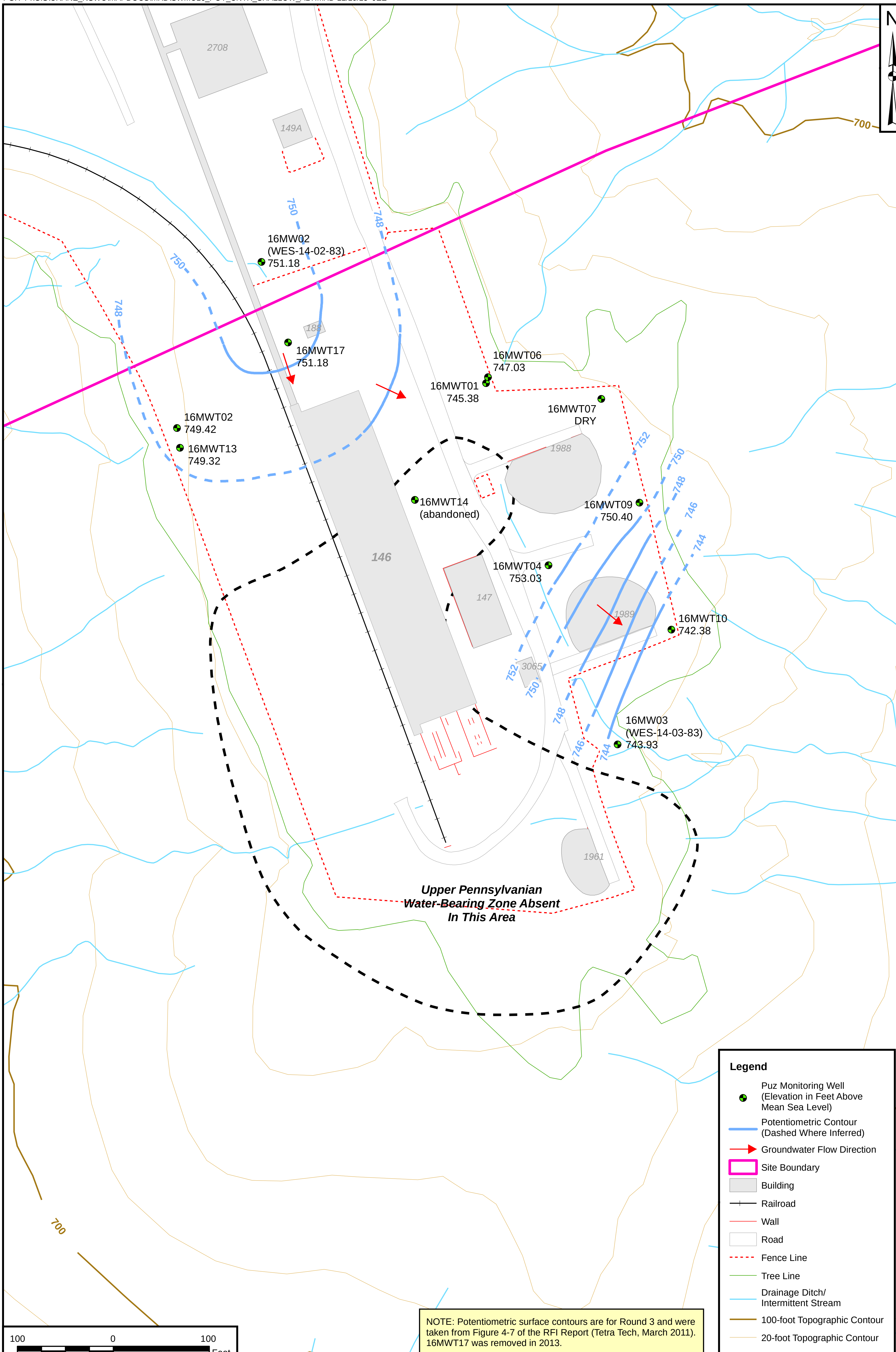
REVISED BY CK	DATE 11/19/15	
SCALE AS NOTED		

NAVFAC

GEOLOGICAL CROSS SECTION C–C'
SWMU 16–CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR
NSA CRANE
CRANE, INDIANA

CONTRACT NO. 3588	
OWNER NO. 0000	
APPROVED BY	DATE
DRAWING NO. FIGURE 1–7	REV. 0

PGH P:\GIS\CRANE_NSWC\MAPDOCS\MXD\SWMU16_POT_CNTR_SHALLOW_ALT.MXD 11/19/15 JEE



NOTE: Potentiometric surface contours are for Round 3 and were taken from Figure 4-7 of the RFI Report (Tetra Tech, March 2011). 16MWT17 was removed in 2013.

DRAWN BY J. ENGLISH	DATE 02/01/10	POTENTIOMETRIC SURFACE MAP FOR UPPER PENNSYLVANIAN WATER-BEARING ZONE - JANUARY 24, 2004 SWMU 16 - CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR NSA CRANE CRANE, INDIANA	CONTRACT NUMBER F27R
CHECKED BY D. COHEN	DATE 11/19/15		APPROVED BY __ DATE __
REVISED BY J. ENGLISH	DATE 11/19/15		APPROVED BY __ DATE __
SCALE AS NOTED			FIGURE NO. FIGURE 1-8 REV 0

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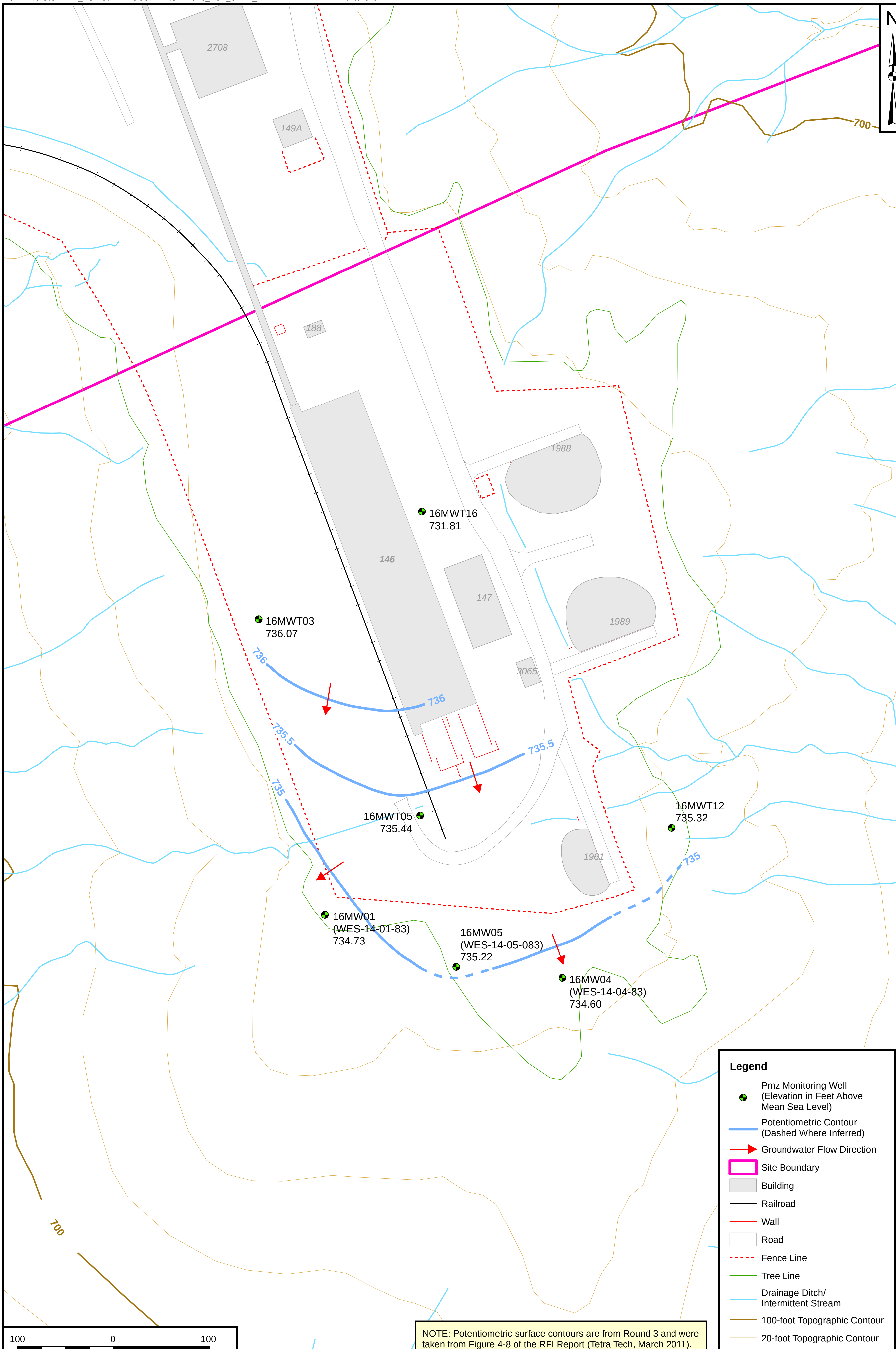

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D. COHEN	11/19/15
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J. ENGLISH	11/19/15
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POTENTIOMETRIC SURFACE MAP FOR
MIDDLE PENNSYLVANIAN WATER-BEARING ZONE - JANUARY 24, 2004
SWMU 16 - CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER	
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APPROVED BY	DATE
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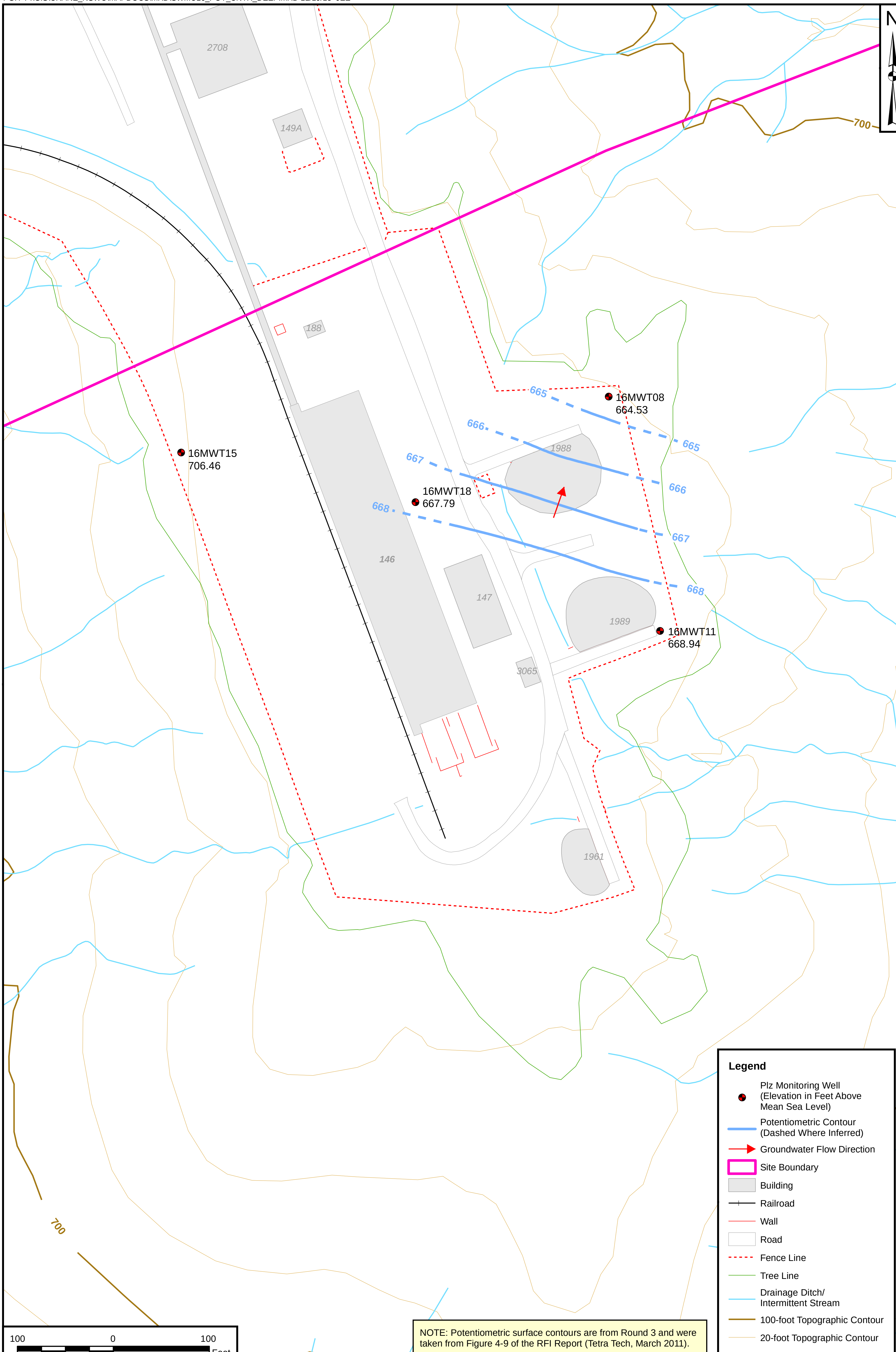
FIGURE NO.	REV
FIGURE 1-9	0

PGH P:\GIS\CRANE_NSWC\MAPDOCS\MXD\SWMU16_POT_CNTR_DEEP.MXD 11/19/15 JEE



NOTE: Potentiometric surface contours are from Round 3 and were taken from Figure 4-9 of the RFI Report (Tetra Tech, March 2011).

DRAWN BY J. ENGLISH	DATE 02/01/10	POTENTIOMETRIC SURFACE MAP FOR LOWER PENNSYLVANIAN WATER-BEARING ZONE - JANUARY 24, 2004 SWMU 16 - CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR NSA CRANE CRANE, INDIANA	CONTRACT NUMBER F27R
CHECKED BY D. COHEN	DATE 11/19/15		APPROVED BY __ DATE __
REVISED BY J. ENGLISH	DATE 11/19/15		APPROVED BY __ DATE __
SCALE AS NOTED			FIGURE NO. FIGURE 1-10 REV 0

2.0 IDENTIFICATION AND DEVELOPMENT OF CORRECTIVE MEASURE ALTERNATIVES

Various investigations, risk assessments, and IMs have been conducted at SWMU 16. Section 2.1 describes the current situation, including previous activities that have resulted in identification of contaminated media and the COCs for those media along with the CSM components that support the development of CAOs and MCSs. Section 2.2 presents the CAO and MCSs, Section 2.3 provides the screening of corrective measure technologies, and Section 2.4 provides the results of identification of corrective measure alternatives for SWMU 16. These four sections meet the requirements of the NSA Crane RCRA Permit, Attachment 0, Task 6, Subtasks A to D.

2.1 DESCRIPTION OF CURRENT SITUATION

The following provides a description of the current situation at SWMU 16 by providing information on previous investigations and IMs conducted at SWMU 16 and presentation of the current understanding of the CSM. The CSM discussion identifies the potential exposure pathways and associated COCs that need to be addressed by corrective measures.

2.1.1 Previous Investigations and Interim Measures

The various environmental investigations and IMs conducted at SWMU 16 are summarized in the following table. Additional information on the 1990s VIMs, RFI Report, and subsequent investigations and IM are provided in Sections 2.1.1.1 to 2.1.1.5.

Investigation	Date	Activities
Various Sampling Activities and Reports	1972 to 1990	An Initial Assessment Study (IAS) (NEESA, May 1983), Preliminary Review/Visual Site Inspection Report (PR/VSI) (A.T. Kearney, March 1987), and RFI Phase I Environmental Monitoring Report (EMR) (Halliburton NUS, November 1992) were prepared as part of initial evaluation of various sites at NSA Crane to assess the potential for releases of contamination that posed a potential threat to human health and the environment. The IAS and PR/VSI provided historical information on SWMU 16 but did not include any sampling data. The EMR was for three SWMUs, including SWMU 16, and presented historical information provided in the IAS and PR/VSI and sampling data collected at various times between 1972 and 1990. The EMR identified potential releases of explosives and metals to groundwater, surface water, and soil and recommended an RFI Phase II Release Assessment. It was possible that polychlorinated biphenyl (PCB)-contaminated materials were also incinerated; however, PCB contamination was not identified.

Investigation	Date	Activities
		The sampling data provided in the EMR (Halliburton NUS, November 1992) include: • 1972 and 1979 – One water sample in one of the settling tanks (sumps) in 1972 and three water and sediment samples near the settling tanks (referred to as the north ditch) were collected and showed detectable levels of explosives [octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX), RDX, and TNT] in water and sediment. The settling tanks received B146 floor drains discharges. At the time, B146 floor drains discharged to the settling tanks, which discharged to drainage ditches. • 1980 and 1981 – Emissions testing was conducted on the incinerators and indicated that a baghouse was necessary to comply with state emissions requirements. • 1982 – Two incinerator ash pile samples were collected and showed concentrations of several metals exceeding Extraction Procedure (EP) Toxicity limits. • 1982 and 1985 – Surface soil/sediment samples (one in 1982 and four in 1985) were collected from drainage ditches south of B146 (running east and west) that showed metals (cadmium and lead) concentrations exceeding EP Toxicity limits and trace levels of explosives (HMX and RDX). • 1983 – Four groundwater monitoring wells (WES-14-1-83 through WES-14-4-83) were installed, soil and groundwater samples were collected, metals were detected in soil, and and metals and TCE were detected in groundwater. A fifth well was installed (WES-14-5-83), but no samples were collected from this location. These wells were included in later groundwater investigations at SWMU 16 and are also referred to as 16MW01 through 16MW05. 16MW02 is considered an upgradient well. • 1989 and 1990 – As part of incinerator closure activities, soil sampling was conducted from 0 to 2 feet below ground surface (bgs) under the concrete floor of the B146 incinerator bays and at locations selected to represent background conditions. A total of 133 soil samples were collected from 34 locations under the incinerator bays, and 16 soil samples were collected from four background locations and analyzed for metals and PCBs. Several metals (arsenic, cadmium, chromium, selenium, and silver) were detected under the incinerator bays at concentrations greater than those observed in site soil background samples. Because of quality concerns with the PCB data for samples collected under the incinerator bays, soil was resampled at six locations (total of 24 samples), and PCBs were not detected in any of these soil samples.
VIM	1995 to 1998	Interim cleanup measures were conducted for the east and west settling tanks, including sealing building floor drains and outlet piping to drainage ditches. TCE-contaminated water found in the settling tanks was treated, and settling tank discharges were connected to the sanitary sewer system. The settling tanks were later removed as part of the 2013 to 2014 IM. Ash- and slag-contaminated soil associated with former incineration activities and the three aboveground fuel oil tanks and visually contaminated soil under the tanks were removed. Residual contaminated soil was later removed as part of the 2013 to 2014 IM. Additional information on VIM activities is provided in Section 2.1.1.1.

Investigation	Date	Activities
RFI Field Work	2003 to 2004	Three rounds of soil, groundwater, surface water, and sediment sampling were conducted to support evaluation of the nature and extent of contamination and site risks. These results were provided in the RFI Report, which was finalized in 2011, and are discussed in more detail in Section 2.1.1.2. Based on the RFI results, subsequent investigations and evaluations included an MNA evaluation, geophysical investigation for a former UST, VI investigations, and an IM.
MNA Investigations	2005 to 2007	Six rounds of groundwater sampling were conducted (Rounds 4 to 9) to provide additional data to evaluate potential MNA of TCE and RDX and degradation products. Results of evaluation of data from Rounds 1 to 3 from the RFI and these six MNA rounds indicated the potential for MNA; however, potential continuing sources to groundwater were also identified as discussed further in Section 2.1.1.3.
Geophysical Investigation	2009	An investigation was conducted to locate a hatch to an UST off the northeastern corner of B146 identified on a historical engineering drawing. The survey concluded that an UST may be present, and the results were used to support the removal of the UST as part of the 2013 to 2014 IM.
VI Investigations	2008 and 2014	Indoor air samples were collected from B146 in 2008 and 2014, and sub-slab soil gas samples (from soil under the floor of B146) were collected in 2014 to evaluate potential risks from VI into B146. Chlorinated VOCs (primarily TCE) were detected in samples collected from the northern portion of the building where TCE degreaser was used, and TCE contaminated soil is present under the building foundation. Although indoor air concentrations did not pose unacceptable risks, a future potential risk was identified if the building foundation was compromised and sub-slab soil gas could impact indoor air quality. The results are discussed further in Section 2.1.1.5.
IM-Related Investigations	2011 to 2012	Soil sampling and toxicity and bioaccumulation toxicity testing were conducted to support development of site-specific ecological cleanup levels for metals in soil to address unacceptable ecological risks identified in the RFI Report. In addition, soil sampling was conducted to further delineate the extent of TCE and metals concentrations in soil to support soil removal as part of IM activities, as discussed in Section 2.1.1.4.
IM	2013 to 2014	The 2013 to 2014 IM was conducted to mitigate ecological risks from metals in soil identified during the RFI and to remove TCE-contaminated soil that was a potential continuing source of contamination to groundwater. In addition, the settling tanks, which were potential sources of chlorinated solvent and explosives contamination, were removed. The IM activities are discussed further in Section 2.1.1.4.

2.1.1.1 1990s VIM

A VIM was conducted at SWMU 16 from 1995 to 1996 to remove contaminated sludge from the east and west settling tanks, three aboveground fuel oil tanks south of B146 and visually contaminated soil under the tanks, and remaining ash and slag contamination from past incineration operations (Morrison Knudson Corporation, February 1997).

Sludge characterization samples from the east and west settling tanks had elevated concentrations of metals (particularly lead and zinc) and a low detection of TNT in the east tank. During removal of the sludge in the west settling tank, additional characterization samples were collected from the sludge and liquid in the tank. The results showed high levels of explosives, metals, and TCE. In addition, TCE-contaminated water was found entering the settling tanks through inlet piping.

Ash from incineration (likely from the ash piles) apparently was blown to other areas south, southeast, southwest, and west of the incinerator bays and further migrated via runoff to drainage ditches. During the VIM, scattered remnants of small ash and slag piles were visible around the southern portion of B146 and by the southeastern drainage ditch discharge. Characterization samples showed elevated metals (particularly lead) concentrations and low concentrations of explosives, VOCs, and PCBs in soil samples. Subsequently, the residual ash and slag and visually contaminated soil were removed, and confirmation samples were collected as part of the VIM. Residual lead concentrations were greater than VIM cleanup levels. The three aboveground fuel oil tanks and visibly stained gravel and surface soil under the tanks were removed, and confirmation sample polycyclic aromatic hydrocarbon (PAH) concentrations were greater than VIM cleanup levels.

A second VIM was conducted between 1996 and 1998 to sample and treat TCE-contaminated water that had drained into the east and west settling tanks, identify the source of the water entering the settling tanks (through smoke testing and geoprobe sampling), and take necessary actions to address the TCE source. Based on the smoke test and geoprobe sampling results, the VIM included repairing broken sewer pipes, rerouting B146 roof drains away from the settling tanks and into drainage ditches, grouting and abandoning building floor drains, and installing sump pumps and new piping from the settling tanks to the sanitary sewer system. As part of the treatment for the settling tank water, the east tank water was piped to the west tank and an air stripper was installed. The terra cotta discharge lines were plugged when the air stripper was installed. It was discovered that stormwater draining from the roof of B146 was flowing into the settling tanks and so the roof drains were rerouted to separate discharge lines that discharge into ditches. The air stripper was operated until TCE levels were low enough to allow direct discharge to the sanitary sewer without treatment, and permanent sump pumps were installed. The source of TCE was never found; however a degreaser was used in B146 during the 1980s. At the time TCE was found in the settling tanks, TCE was not in use in B146 (Morrison Knudson Corporation, December 1999).

Soil stockpile samples from excavation associated with pipe installation (for rerouted roof and piping from sump pumps to sanitary sewer) were analyzed for explosives, metals, PCBs, and TCE. Although levels of explosives, metals, and TCE in both samples and PCBs in the eastern stockpile sample were low or non-detected, the PCB concentration in the western stockpile was approximately 20 milligrams per kilogram (mg/kg) and subsequently 43 tons of PCB-contaminated soil were disposed of as Toxic

Substances Control Act (TSCA)-regulated waste in April 1998 (Morrison Knudson Corporation, December 1999).

2.1.1.2 RFI Report

The RFI was conducted at SWMU 16 from February through May 2003 (Round 1), October 2003 through January 2004 (Round 2), and July through November 2004 (Round 3), and the results are provided in the SWMU 16 RFI Report (Tetra Tech, March 2011). The environmental media sampled included groundwater, surface and subsurface soil, surface water, and sediment.

Table 2-3 in the RFI Report provides the analyses conducted for individual samples by round. Depending on the sampling round, groundwater samples were analyzed for various combinations of energetic compounds, herbicides, total and dissolved metals, miscellaneous inorganic parameters, semivolatile organic compounds (SVOCs), VOCs, and water quality parameters. The analyte list was focused over time to more accurately evaluate potentially site-related contaminants in SWMU 16 groundwater. During RFI Round 1, the analytical program for soil, groundwater, surface water, and sediment included explosives, metals, and SVOCs (including two SVOCs analyzed using a herbicide method and PAHs). Additionally, soil analyses included VOCs, dioxins/furans, and PCBs; groundwater analyses included VOCs, nitrites/nitrates, and ammonia; surface water analyses included nitrites/nitrates and ammonia; and sediment analysis included acid volatile sulfide (AVS) and simultaneously extracted metals (SEM). Six new monitoring wells were installed and sampled as part of the Round 1 fieldwork. After Round 1 sampling, the analyte list was reduced to eliminate dioxins/furans, herbicides, SVOCs, PAHs in all media because these chemicals were not detected or few detections at low concentrations of no environmental significance were observed. Results from Round 1 groundwater sampling indicated that additional monitoring wells were required to fully delineate groundwater contamination; therefore, Round 2 included the installation of 12 new monitoring wells. For soil, Rounds 2 and 3 were designed to delineate the extent of VOCs underlying B146 and along the drain line to the settling tanks and the extent of metals contamination in soil and in the area where the ash piles existed. Upon completion of Round 2 sampling, it was concluded that further delineation of groundwater contamination was required. Therefore, three new monitoring wells were installed and sampled as part of Round 3 fieldwork.

Groundwater sampling during the RFI included monitoring wells installed in the three bedrock zones (Puz, Pmz, and Plz samples) and monitoring wells installed in valley deposits (valley samples). Water samples were collected from the three settling tanks (sump samples), and surface water and sediment samples were collected from drainage ditches located upgradient of the site (gully upgradient locations), from locations within drainage ditches and intermittent streams potentially impacted by site releases (gully locations), from locations upgradient of where potentially site impacted surface water enters Turkey Creek

(TCMS upgradient locations), and from locations downgradient of where the drainage ditches and intermittent streams enter Turkey Creek (TCMS locations). The samples from the drainage ditches were collected on steeper hillsides and generally represent drainage channels that are typically dry, except during and immediately after storm events. Turkey Creek locations have more frequent occurrences of flowing water; however, the section of Turkey Creek near SWMU 16 is dry for a significant portion of the year.

Contamination at SWMU 16 was found to be consistent with previous site operations and included primarily chlorinated VOCs and metals in soil and chlorinated VOCs, explosives, and metals in groundwater (Puz and/or Pmz), surface water, and sediment. Chlorinated VOC concentrations in soil were greatest west of B146 and under the northern portion of the building, whereas groundwater concentrations were greatest nearer to the east and west settling tanks. Except for one low detection of HMX in a surface soil sample, explosives were not detected in soil at SWMU 16 (outside of the B146 footprint); however, elevated concentrations of explosives (particularly RDX) were detected in groundwater on the eastern side of B146. Elevated concentrations of metals (particularly antimony, copper, lead, and zinc) were detected in surface soil in the vicinity of the former ash pile and incinerator. Elevated levels of two metals (iron and vanadium) in Puz and Pmz groundwater did not appear to be site related.

Based on sampling and analyses conducted prior to and during the RFI, the upper zone of groundwater (Puz) has been contaminated with chlorinated solvents and explosives. Nearly all of the groundwater in the uppermost bedrock is flowing laterally toward the upper slopes of the ridge. Some of this groundwater seeps into drainage ditches on the sides of the ridge, and some of the contaminated groundwater may be taken up by trees and other vegetation and transpired. Plant uptake appears to limit the rate at which contaminants in groundwater migrate to the base of the ridge and enter the tributary stream and therefore limits contaminant concentrations in Turkey Creek to low levels. TCE in groundwater is also degrading as evidenced by the presence of degradation products. Some of the explosives contaminants (mainly RDX and HMX), TCE, and cis-1,2-dichlorothene (DCE) are reaching the drainage ditches on the northwestern side of the site, which is a tributary of Turkey Creek.

RDX, HMX, and TCE have migrated to the middle aquifer groundwater monitoring wells (Pmz) at concentrations less than their concentrations in the upper groundwater zone. The siltstone and shale layers between the upper and middle water-bearing zones are a partially effective aquitard and prevent much of the shallow groundwater and contaminants from reaching the intermediate groundwater system in the ridge. No explosive compounds and relatively low concentrations of VOCs were detected in the lower Pennsylvanian water-bearing zone and in the valley bottom wells. The siltstone and shale layers between the middle and lower water-bearing zones are an effective aquitard and prevent most shallow groundwater and contaminants from reaching the deeper groundwater system beneath the ridge.

The soil, groundwater, surface water, and sediment data collected during the RFI and the site-specific operational history for SWMU 16 were adequate to support the development of a baseline human health risk assessment and screening-level ecological risk assessment (SERA) for SWMU 16. The results of the RFI risk assessment were as follows:

- No unacceptable human health risks were identified for direct contact with surface or subsurface soil, sediment, or surface water.

- Several chlorinated VOCs were detected in soil at concentrations exceeding soil-to-groundwater migration screening levels and were also detected in groundwater indicating that the soil could be adversely impacting groundwater.

- Evaluation of results from indoor air samples collected from inside B146 in 2008 as part of another study indicated that risks for the VI pathway for current occupational workers were acceptable. A future residential exposure scenario for VI was not evaluated.

- For groundwater at SWMU 16, unacceptable risks were identified for future occupational workers, recreational users, and hypothetical future residents who may use site groundwater for drinking. The identified COCs were 1,1,2-trichloroethane (TCA), carbon tetrachloride, cis-1,2-DCE, tetrachloroethene (PCE), TCE, vinyl chloride, iron, vanadium, 2-amino-4,6-dinitrotoluene, and 4-amino-2,6-dinitrotoluene.

- For plants and invertebrates, ecological risk was determined to be unacceptable for direct contact by terrestrial vegetation and ingestion of surface soil and food by soil invertebrates from exposure to antimony, copper, lead, and zinc. Additionally, for mammals and birds, ecological risk was determined to be unacceptable for incidental surface soil ingestion and ingestion of food by insectivorous birds from exposure to lead and zinc. Based on the results of the SERA, antimony, copper, lead, and zinc in surface soil were retained as ecological COCs that required further evaluation before corrective action.

Based on the conclusions of the RFI Report, additional investigations were completed to support further evaluations of metals contamination in surface soil, chlorinated VOC contamination in soil and associated potential VI in B146, and chlorinated VOC and explosives contamination in groundwater.

2.1.1.3 MNA Study

An MNA study was conducted to determine whether natural attenuation was a feasible remedy for chlorinated VOCs and explosives in groundwater at SWMU 16. Data from a total of nine rounds of groundwater sampling and seven rounds of surface water sampling were compiled for the MNA study, which incorporated the three rounds of sampling performed during the SWMU 16 RFI and six rounds conducted from February 2005 to April 2007. The results were summarized in the Final MNA Report (Tetra Tech, July 2010). Excerpts from the 2010 MNA Report are provided in Appendix A.1 and include a table with the Rounds 1 to 9 groundwater elevations and Round 9 potentiometric maps. Table 2-1 provides a summary of explosives and VOC concentrations detected in groundwater, surface water, and sediment. Figure 2-1 includes TCE and RDX concentrations in groundwater, surface water, and sediment samples at SWMU 16. Appendix A.2 includes data tables with all results (i.e., detected and nondetected results) for VOC and explosives, including data used as part of the MNA study.

As part of the MNA study, groundwater monitoring wells were sampled to represent upgradient (16MW02), source area (16MWT06, 16MWT13, and 16MWT17), plume area (16MW03, 16MWT04, 16MWT09, and 16MWT10), leading plume edge (16MW04), and uncontaminated downgradient (16MWT12) and deep (16MWT11, and 16MWT15) conditions.

The MNA study showed that RDX concentrations were greatest on the top of the ridge near the wells on the eastern side of the SWMU 16 operational area [16MWT04 and 16MWT09 with maximum detections of 200 and 110 micrograms per litter (µg/L), respectively] and concentrations decreased downgradient. The MNA evaluation suggested that the RDX plume within the Puz was relatively stable and had not migrated to the downgradient well in the Pmz. RDX degradation by-products were consistently detected where RDX concentrations exceeded 50 µg/L, demonstrating that some RDX degradation was occurring. Although RDX concentrations were relatively low in source area wells (maximum detection was 18 µg/L), concentrations of RDX in groundwater exhibited potential increasing or stable trends in two of the three source area wells (16MWT06 and 16MWT17 located near the east and north settling tanks). It appeared that RDX was still being released to groundwater from the north settling tanks. In surface water, RDX was the most frequently detected explosives but was generally detected at low concentrations. The greatest concentrations of RDX in surface water were detected at location 16SW30 (concentrations ranged from 13 and 24 µg/L). RDX concentrations in surface water exhibited a downward trend since the first sample was collected in Round 3. Although not identified as COCs in the RFI Report, the results of the MNA evaluation showed consistent elevated concentrations of TNT in groundwater at 16MWT06 and elevated RDX concentrations in groundwater at several wells, supporting the need to include TNT and RDX as groundwater COCs for the site.

TCE concentrations were greatest in source area wells (near the settling tanks concentrations, were greater than 10,000 µg/L) and decreased significantly in downgradient wells (maximum detection of 10 µg/L). TCE concentrations in the contaminant source area showed an upward trend, indicating the presence of ongoing sources of TCE from overlying soils. TCE concentrations at most plume wells exhibited downward trends. TCE was detected in surface water, in the range of 5 to 20 µg/L, at only one location (16SW12) and has exhibited no apparent trend in concentrations. cis-1,2-DCE was detected in the early and later rounds at 16SW12 at concentrations less than 0.15 µg/L.

Based on the SWMU 16 MNA evaluation, the groundwater plumes for RDX and TCE are relatively stable. Statistical and temporal plots indicated that RDX and TCE concentrations in some source and plume area wells are decreasing with time. In addition, degradation products of RDX, TNT, and TCE were detected at several wells, indicating that natural attenuation processes are occurring in SWMU 16 groundwater. However, some wells continue to show steady or increasing concentrations of RDX and TCE that may be a result of continuing impacts from contaminated soil areas near these wells. Based on the information provided in the report, further action was recommended to address potential sources of chlorinated VOC and explosives contamination in groundwater.

2.1.1.4 IM Removal Action for SWMU 16

The Navy decided to perform an IM to mitigate ecological risks from metals in soil and to eliminate potential sources of chlorinated solvents in soil surrounding B146, which served as sources for groundwater contamination outside of the B146 footprint. In addition, the settling tanks, which were potential sources of chlorinated solvent and explosives contamination in groundwater, and the UST northeast of B146 were removed as part of the IM, and monitoring well 16MWT17, located within the excavation area, was abandoned (see Figure 1-4).

In support of the IM, supplemental soil data were collected in 2011 and 2012 to conduct toxicity and bioaccumulation tests for development of site-specific ecological cleanup levels for metals (antimony, copper, lead, and zinc) and to delineate the extent of TCE and metals soil contamination for removal as part of the IM. Sampling was also conducted around the UST to support removal of the UST and surrounding soil, if needed. Based on the supplemental soil data, an IMWP was prepared (Tetra Tech, August 2013), and the IM was completed in 2014. Figure 2-2 shows the soil excavation areas, and Figure 1-4 shows locations of site infrastructure removed and/or replaced as part of the IM. Soil with concentrations exceeding the TCE cleanup level was removed from accessible areas outside of the building footprint, and soil with concentrations exceeding the metals cleanup levels were removed from three areas south of the former incinerators. Because of mission-critical operations in B146, TCE-contaminated soil under the building could not be removed as part of this IM. Locations with TCE concentrations greater than the cleanup level and the associated TCE concentrations are shown on Figure 2-2 and are all from samples collected under the building.

A 2009 geophysical survey located the UST, and the UST water and surrounding soil were sampled in 2011. Based on evaluation of the soil data, no soil removal for this area was required as part of the removal of the UST (Tetra Tech, August 2013).

As part of the IM, 8,340 tons of contaminated soil were excavated and disposed of off site. Approximately 8,203 tons of non-hazardous (Subtitle D) contaminated soil were excavated and disposed of off site, and approximately 137 tons of hazardous (Subtitle C) contaminated soil (classified as hazardous because of TCE concentrations of 37,500 micrograms per kilogram (µg/kg) at 16SB200) were excavated and disposed of off site (Figure 1-4). The SWMU 16 excavations were backfilled with 7,920 tons of gravel, and excavated areas were restored with topsoil, grass seed, gravel, or asphalt pavement to match pre-removal action site conditions.

The IMR (Tetra Tech, September 2014) recommended no further action for soil outside the footprint of B146. Removal of SWMU 16 contaminated soil containing metals at concentrations exceeding cleanup levels has mitigated ecological risk to acceptable levels, and removal of TCE-contaminated soil eliminated soil sources of TCE releases to groundwater outside the footprint of B146. The only identified contaminated soil remaining at SWMU 16 is beneath the foundation of B146 (Figure 2-2). The building structure and foundation serve to isolate this contamination from the environment.

2.1.1.5 B146 VI Studies

Two VI studies have been conducted at B146 to determine whether TCE and degradation products from contaminated soil and groundwater under the building were present in indoor air. The first was conducted in 2008, and the results were used in the baseline human health risk assessment presented in the SWMU 16 RFI Report (Tetra Tech, March 2011). Results of the initial VI study indicated that TCE was present in indoor air within three of the five rooms sampled (in B146 work Bays 3, 4, and 5 in the northern portion of the building); however, the risk assessment completed during the RFI did not show unacceptable risks for the VI pathway. The 2008 sampling was conducted with the building closed, unoccupied, all windows and doors closed, and the HVAC system turned off.

A second VI study was conducted at B146 in May 2014 to collect both indoor air and sub-slab soil gas samples. Analytical results from the second study indicated that TCE and other chemicals are present primarily in building work bays and at sub-slab locations underlying the northern portion of B146 (Bays 3, 4, and 5), confirming the results of the previous study. Indoor air samples included detections of

1,2-dichloroethane, dichlorodifluoromethane, methylene chloride, PCE, TCE, and trichlorofluoromethane. The analytical results for sub-slab soil gas samples included detections of chloroform, cis-1,2-DCE, dichlorodifluoromethane, PCE, TCE, and trichlorofluoromethane. A human health risk evaluation was completed to evaluate the VI pathway at SWMU 16 for both residential and industrial receptors incorporating the results from the second study (Tetra Tech, November 2014). The risk evaluation did not identify any unacceptable risks for residential or industrial receptors resulting from exposure to indoor air in B146. However, concentrations of some chemicals in sub-slab soil gas were significantly greater than indoor air concentrations. The risk evaluation concluded if the floor was compromised in the future, indoor air concentrations and corresponding risks could be greater; therefore, maintenance of the integrity of the floor in Bays 3, 4, and 5 was recommended (Tetra Tech, November 2014). USEPA also recommended that additional air sampling be conducted as part of corrective measures to confirm that air concentrations remain acceptable.

2.1.2 Conceptual Site Model

Past explosives filling (cast loading), pressure washout, and incineration operations at SWMU 16 resulted in releases of explosives, chlorinated solvents, and metals to soil, groundwater, and/or surface water and sediment in drainage ditches and intermittent streams at the site. Turkey Creek, which receives surface water and groundwater discharges from the site, is the ultimate receptor of contaminant migration from SWMU 16.

As discussed in Section 1.5, wastewater from operations was discharged through storm drains to drainage ditches (prior to 1978), and floor drains in the building discharged to the east and west settling tanks (until the mid-1990s), which then discharged to drainage ditches. The floor drains apparently also received releases from the TCE degreaser previously used in the northern portion of B146 (specific years of operation unknown; however it was not present during the VIMs in the 1990s). After 1978, wastewater was collected for treatment off site, and as part of the VIMs in the 1990s, the floor drains were sealed and the settling tank discharges were connected to the sanitary sewer system. The north settling tank, installed in 1974, received hotwell water from operations and was connected to the sanitary sewer system. The settling tanks were removed as part of the 2013 to 2014 IM. Based on previous investigations, discharges and possible leaks from floor drains and settling tanks resulted in chlorinated VOC contamination of soil and chlorinated VOC and explosives contamination of groundwater, surface water, and sediment. Explosives contamination of soil was not identified. Chlorinated VOC-contaminated soil outside the B146 footprint was removed as part of the IM; however, TCE-contaminated soil remains under the floor of B146 (under the concrete foundation).

Incineration operations conducted on the southern side of B146 were the sources of metals contamination. As discussed in Section 1.5, incineration of munitions, conducted from approximately 1967 to 1987, was associated with disposal of ash and slag on surface soil south of B146. The incinerators were closed in the early 1990s, and contamination (including ash, slag, and metals-contaminated soil) from the incineration operations was removed as part of the IMs. The primary metals identified (likely from incineration of munitions such as shell casings and bullets) were antimony, copper, lead, and zinc. As discussed in Section 2.1.1, most of the contaminated material from incineration operations was removed as part of closure of the incinerators and the two VIMs in the 1990s. As part of the RFI, residual concentrations of antimony, copper, lead, and zinc in soil were found to pose potential unacceptable ecological risks, and this contamination was removed as part of the 2013 to 2014 IM. Therefore, there is no longer an unacceptable ecological risk for soil, and metals are no longer COCs for soil at SWMU 16. Although iron and vanadium were retained as COCs for groundwater in the RFI Report (Tetra Tech, March 2011), further evaluation of groundwater data shows that elevated concentrations of iron and vanadium detected in groundwater are the result of background conditions or high turbidity in groundwater samples as discussed herein. The greatest numbers of metals in groundwater were detected in Pmz wells, and concentrations of metals were greater in the Plz than in the Puz. This pattern of detections is opposite that for site-related organic contaminants in groundwater (where the greatest concentrations are in the Puz) and is also not consistent with what would be expected if surface releases to soil were the source of groundwater metals contamination. This suggests that the metals initially identified as COCs in groundwater are not site related but may be caused by natural oxidation, weathering, and leaching of these metals from bedrock. Comparison of groundwater concentrations to facility background concentrations in bedrock showed that most of the concentrations in groundwater were similar to or less than the 95-percent upper tolerance limit concentrations (Tetra Tech, September 2013); however, some concentrations were greater than facility background levels. Review of turbidity data and comparison of total and dissolved concentrations for wells with elevated iron and/or vanadium concentrations showed that turbidity was typically greater than 10 nephelometric turbidity units (NTUs) and that dissolved concentrations were significantly less than total concentrations. Therefore, the elevated concentrations are not considered representative of site groundwater concentrations. In addition, the RFI Report provides an evaluation of surface and subsurface soil concentrations of iron and vanadium and concluded that the soil concentrations of these two metals were similar to natural background levels. Based on this evaluation, iron and vanadium are no longer COCs for groundwater and are not discussed further as part of the CMS.

Based on the SWMU 16 background information (Section 1.5) and previous investigations and actions (Section 2.1.1), likely contaminant release and migration pathways and unacceptable risks and contaminant distribution for chlorinated VOCs and explosives were reviewed to understand the current situation and to support identification of the CAOs for remaining unacceptable risks at SWMU 16. The current situation for chlorinated VOCs are discussed further in Section 2.1.2.1, the current situation for explosives are discussed in Section 2.1.2.2.

2.1.2.1 Chlorinated VOCs

Chlorinated VOCs were detected in soil, groundwater, surface water, and sediment. Past releases from operations to soil, settling tanks, and drainage ditches are considered the sources of contamination. With the exception of TCE-contaminated soil under the B146 floor, the likely sources of chlorinated VOCs have been removed. Discharges from operations to drainage ditches and floor drains have been discontinued, the settling tanks have been removed, and the use of TCE degreaser has been discontinued. Contaminated soil outside the B146 footprint was excavated, and the settling tanks were removed as part of the 2013 to 2014 IM. Pipes from the building to the settling tanks that were within the IM excavation area (see Figure 1-4) were removed; pipes from floor drains under the building likely still remain. TCE-contaminated soil remains under the B146 floor in the northern portion of the site, where the TCE degreaser was located. Contaminated soil under the B146 floor could not be removed as part of the IM because mission-critical operations in the building could not be disrupted. The concrete floor is preventing infiltration of water into TCE-contaminated soil (and subsequent potential contamination of underlying groundwater) and is limiting VI into the building.

Based on the results of the RFI Report, MNA Study, and VI evaluation, there are potential unacceptable risks for human receptors exposed to chlorinated VOCs in groundwater if site groundwater is used for drinking, and there are potential future unacceptable risks from migration of TCE in soil to groundwater or to indoor air if the integrity of the B146 floor is compromised. Based on the available groundwater and soil gas data, there is a future potential unacceptable risk for indoor air to occupants of any new buildings constructed at the site as a result of subsurface VI. Risks are acceptable for exposure to surface water and sediment by all receptors evaluated; however, groundwater migrates to surface water and so there is a future potential for unacceptable risk for surface water receptors if there is a significant increase in chlorinated VOC concentrations in surface water in ditches and intermittent streams that discharge to Turkey Creek. The chlorinated VOCs that contribute to unacceptable risk and are retained as COCs for SWMU 16 are carbon tetrachloride, cis-1,2-DCE, PCE, 1,1,2-TCA, TCE, and vinyl chloride for groundwater and TCE for soil and soil gas. In addition, 1,1-DCE concentrations in groundwater exceeded the federal Maximum Contaminant Level (MCL) (40 Code of Federal Regulations 141.61) and IDEM residential vapor exposure groundwater concentration (IDEM, 2015) and 1,1-DCE was also retained as a COC for groundwater.

Of the chlorinated VOCs, TCE was the primary contributor to unacceptable risks and had the widest extent of contamination; therefore, TCE was used to represent chlorinated VOC contamination. A summary of TCE concentrations in groundwater, surface water, and sediment at each sampling location for SWMU 16 is shown on Figure 2-1, and results for elevated TCE concentrations in soil under the B146 floor are shown on Figure 2-2. Table 2-1 provides a summary of VOC concentrations detected in groundwater, surface water, and sediment. Tables with complete VOC analytical results for outdoor and indoor air, soil gas, soil, groundwater, and surface water and sediment samples are provided in Appendix A.2.

The greatest concentrations of TCE were detected in six Puz wells (16MW03, 16MWT01, 16MWT06, 16MWT09, 16MWT13, 16MWT17); however, one Pmz well (16MWT16) also had elevated concentrations in the two rounds during which this well was sampled. Other Pmz, Plz, and valley wells had low chlorinated VOC concentrations. In Puz wells, concentrations of TCE greater than 10,000 µg/L were detected in source area wells (16MWT06, 16MWT13, and 16MWT17). TCE concentrations were much lower at 16MWT01, located within approximately 10 feet of 16MWT06. The maximum concentrations of TCE in 16MWT16, the Pmz well located east of B146 near where the former TCE degreaser was located was 390 µg/L during Round 2 (in 2004); this well was not included in subsequent rounds, so it is not known whether concentrations have changed. Except for carbon tetrachloride, the maximum concentrations of the other chlorinated VOC COCs were in the source area wells. The maximum concentration of carbon tetrachloride (17 µg/L) was at 16MW03, with other multiple detections at 16MWT06 that were less than 5 µg/L. The MNA evaluation (Tetra Tech, July 2010) indicated that chlorinated VOCs in groundwater are naturally degrading based on the presence of degradation products, but concentration trends at two of the three source area wells (16MWT06 and 16MWT17) suggested continuing sources (which were removed as part of the 2013 to 2014 IM). The maximum detection of TCE at 16MWT06 (740,000 µg/kg) suggests that a dense non-aqueous-phase liquid (DNAPL) may be present in groundwater. The MNA evaluation showed a significant decrease in chlorinated VOC concentrations over time at the third source area well (16MWT13), which had TCE concentrations decreasing from 62,000 µg/L in 2003 to 470 µg/L in 2007. Although the MNA evaluation indicated that the groundwater plume was relatively stable, no groundwater sampling has been conducted since the 2013/2014 IM; therefore, it is not known whether concentrations have changed since that time.

Nearly all of the groundwater in the Puz flows laterally toward the upper slopes of the ridge; some of this groundwater seeps into drainage ditches on the side of the ridge, which eventually flow into Turkey Creek (see Figure 2-1), and some may be taken up by the dense trees and other vegetation on the slope (see Figure 1-2) and transpired. Natural phytoremediation likely is reducing the rate of contaminant migration to the base of the ridge and Turkey Creek. The siltstone and shale layers between the Puz and Pmz and between the Pmz and Plz are effective aquitards preventing much of the Puz groundwater and contaminants from reaching the Pmz and deeper zones, as shown by the relatively low concentrations in Pmz and Plz wells (Tetra Tech, March 2011).

Surface water and sediment sampling results have not shown a significant impact from groundwater migration, and no current unacceptable risks were identified for these media. Of the chlorinated VOC groundwater COCs, cis-1,2-DCE and TCE were detected in surface water samples at concentrations ranging from 0.6 to 3.4 µg/L and 0.8 to 26 µg/L, respectively. As shown on Table 2-1, the maximum detections were at 16SW29, located in a drainage ditch west of the west setting tank and 16MWT13. cis-1,2-DCE and TCE were also detected in water from the settling tanks when they were sampled in 2003 (concentrations ranged from 2.9 to 7.4 µg/L and 3.3 to 9.2 µg/L, respectively). cis-1,2-DCE and TCE were infrequently detected in sediment and at low concentrations (cis-1,2-DCE in one sample at 3 µg/kg and TCE in two samples at 2 and 19 µg/kg).

As discussed in Section 2.1.1.5, the risk assessment showed that chlorinated VOC concentrations in indoor air during the two VI investigations did not pose an unacceptable risk. The 2014 VI investigation included collecting air samples from inside B146 and soil gas samples from soil under the B146 floor. The indoor air samples had VOC concentrations less than IDEM indoor air screening levels for commercial/industrial exposure; TCE concentrations in indoor air from Bays 3, 4, and 5 ranged from 0.59 to 1.88 micrograms per cubic meter (µg/m^3). However, TCE concentrations in soil gas samples collected from under Bays 3, 4, and 5 (74.7, 1,021, and 151 to 255 µg/m^3, respectively) were greater than IDEM indoor air screening levels for commercial/Industrial exposure (8.8 µg/m^3) (IDEM, 2015), indicating that future migration from soil to soil gas to indoor air could present potential unacceptable risk in the future if the integrity of the B146 floor (concrete slab) is compromised.

Based on the current CSM for chlorinated VOC contamination, CAOs were developed in Section 2.2 to address potential unacceptable risks from exposure to groundwater COCs if it is used for drinking and indoor air and prevent potential future migration of TCE contamination in soil under the building floor to groundwater. In addition, a CAO was developed to address the potential for groundwater COCs to migrate to surface water at concentrations that could result in future unacceptable risks to surface water receptors in Turkey Creek.

2.1.2.2 Explosives

Explosives were detected in groundwater, surface water, and sediment from past releases of wastewater (prior to 1978) associated with B146 operations to storm drains and drainage ditches and possibly from discharges or leaks from the three settling tanks that received discharges from inside B146. The settling tanks were removed as part of the 2013 to 2014 IM (see Figure 1-4). The likely sources of explosives have been removed. Explosives contamination was not found in soil outside B146; however, explosives were detected in groundwater and water collected from the settling tanks (sump samples) and drainage ditches (gully samples). There were also several low detections of explosives in sediment samples collected from drainage ditches.

Based on the results of the RFI Report and MNA Study, there are potential unacceptable risks for human receptors exposed to explosives in groundwater if site groundwater is used for drinking. Risks were acceptable for surface water and sediment; however, groundwater migrates to surface water and so there is a future potential for unacceptable risk for surface water if groundwater concentrations of explosives migrate to surface water at concentrations that could result in future unacceptable risks to surface water receptors in Turkey Creek. The explosives that contribute to potential unacceptable risk and that have been are retained as COCs for groundwater at SWMU 16 are 2-amino-4,6-dinitrotoluene, 4-amino-2,6-dinitrotoluene, RDX, and TNT.

Of the explosives COCs, RDX was the primary contributor to risks and had the widest extent of contamination; therefore, RDX was used to represent explosives contamination, as shown on Figure 2-1. Table 2-1 provides a summary of explosives concentrations detected in groundwater, surface water, and sediment. Tables with complete explosives analytical results for soil, groundwater, surface water, and sediment samples are provided in Appendix A.2.

The greatest concentrations of RDX were detected in four Puz wells east and southeast of B146 (16MWT04, 16MWT09, 16MWT10, and 16MW03), with concentrations generally ranging from 40 to 120 µg/L and with a maximum detection at 16MWT04 of 200 µg/L. Nearby Pmz and Plz wells and surface water samples had RDX concentrations generally less than 1 µg/L and all less than 7 µg/L (IDEM Tap Water screening level). One surface water location (16SW30) from the drainage ditch east of 16MWT09 had detected concentrations of RDX ranging from 13 to 24 µg/L during sampling rounds from 2004 to 2006 but was non-detect in the last round collected in 2007. RDX was not detected in any of the Turkey Creek samples. RDX concentrations at Puz well 16MWT06, near the east settling tank, showed an increasing trend from less than 7 to 18 µg/L from 2003 to 2007. Although RDX was detected at a concentration of 9.2 µg/L in water collected from the settling tank in 2003, water in the north settling tank at that time had much greater concentrations of RDX (88,000 µg/L), which may also have been contributing to groundwater contamination in the area. 16MWT17, located near the north settling tank had low RDX detections (ranging from 4.3 to 4.8 µg/L). Water in the west settling tank and nearby Puz wells had low detections of RDX. RDX concentrations in Pmz and Plz wells and surface water samples from drainage ditches nearby the settling tanks were low or non-detected.

For the other explosives COCs, maximum concentrations were detected at 16MWT06, which showed increasing trends similar to RDX, with concentrations increasing from less than to greater than IDEM Tap Water screening levels. Specifically, TNT concentrations increased from less than 5 to 33 µg/L, compared to the IDEM Tap Water screening level of 9.8 µg/L, and 2-amiono-4,6-dinitrotoluene and 4-amino-2,6-dinitrotoluene concentrations increased from less than 5 to 150 and 70 µg/L, respectively, compared to the IDEM Tap Water screening level of 39 µg/L. These three explosives were detected at low concentrations (approximately 2 µg/L or less) in water sample from the west settling tank and were not detected in water collected from the north and east settling tanks. At the other Puz wells where RDX concentrations exceeded the IDEM Tap Water screening level, 2-amino-4,6-dinitrotoluene and 4-amino-2,6-dinitrotoluene were detected at concentrations of 1 µg/L or less and were also detected at the one surface water location where RDX was detected (16SW30) at concentrations less than 1 µg/L. TNT was not detected at any of these locations, and the three explosives were not detected in any Pmz, Plz, sediment, or other surface water samples.

As discussed in Section 2.1.1.3, the RDX plume within the Puz was relatively stable and had not spread to the downgradient well in the Pmz, and some RDX degradation was observed. RDX and TNT and degradation products showed increasing trends at 16MWT06, located near the east and north settling tanks. The settling tanks were removed as part of the 2013 to 2014 IM. Although the MNA evaluation indicated that the groundwater plume was relatively stable and the IM removed the likely sources of explosives at 16MWT06, groundwater sampling has not been conducted since the IM; therefore, it is not known whether concentrations have changed since that time.

As discussed in Section 2.1.2.1, groundwater in the Puz mostly flows laterally toward the upper slopes of the ridge and flows to drainage ditches and Turkey Creek or is taken up by the dense trees and vegetation on the slope. Incidental phytoremediation likely is reducing the rate of contaminant migration to the base of the ridge and Turkey Creek. The siltstone and shale layers between the Puz and Pmz and between the Pmz and Plz are effective aquitards preventing much of the Puz groundwater and contaminants from reaching the Pmz and deeper zones, as shown by the relatively low concentrations in Pmz and Plz wells (Tetra Tech, March 2011).

Based on the current CSM for explosives contamination, CAOs were developed in Section 2.2 to address potential unacceptable risks from exposure to groundwater COCs if it used for drinking. In addition, a CAO was developed to address the potential for groundwater COCs to migrate to surface water at concentrations that could result in future unacceptable risks to surface water receptors in Turkey Creek.

2.2 ESTABLISHMENT OF CORRECTIVE ACTION OBJECTIVES

Based on the actual and potential exposure pathways discussed in Section 2.1.2, CAOs and MCSs were developed as described in Sections 2.2.1 and 2.2.2.

2.2.1 Corrective Action Objectives

The following CAOs have been identified for SWMU 16:

- CAO 1: Prevent TCE in soil beneath B146 from migrating to groundwater at concentrations that will cause groundwater to exceed MCSs.

- CAO 2: Prevent future unacceptable indoor air risks to occupants inside B146 and new structures resulting from VI.

- CAO 3: Prevent exposure to site groundwater with COC concentrations greater than MCSs to future occupational workers, recreational users, and hypothetical residents.

- CAO 4: Prevent future unacceptable risks to ecological and human receptors of Turkey Creek resulting from migration of groundwater COCs to surface water at concentrations that would cause an ecological effects quotient greater than 1 for ecological receptors or a carcinogenic risk greater than 10^{-4} or a hazard index greater than 1 for human receptors.

2.2.2 Media Cleanup Standards

Cleanup goals, or MCSs, for groundwater COCs have been identified to address potential unacceptable risks at SWMU 16 for drinking water and VI. As shown in Table 2-2, potential sources of MCSs considered for groundwater include federal MCLs (40 Code of Federal Regulations 141.61), IDEM vapor exposure groundwater concentrations as presented in Appendix A of the Remediation Closure Guide as updated in 2015 (IDEM, 2015), and IDEM Tap Water Screening Levels as presented in Appendix A of the Remediation Closure Guide as updated in 2015. There are currently no NSA Crane background groundwater concentrations for the COCs. Table 2-2 presents the groundwater MCSs for SWMU 16 and identifies the source of the MCS for each COC. The groundwater MCS selected on Table 2-2 will be protective of both the drinking water and VI pathway.

MCSs for surface water to address groundwater migration to surface water were not developed in this CMS because pre-IM surface water data indicate that groundwater migration to surface water does not present a current unacceptable risk and IM activities removed the sources of contamination to groundwater at the site. A comparison of groundwater MCSs to Indiana Water Quality Standards (WQSs) in Table 2-2 shows that groundwater MCSs are less than the WQSs; therefore, meeting the groundwater MCSs will be protective of surface water. However, WQS are not available for the explosives COCs. For long-term monitoring (LTM) purposes, the WQSs could be used for comparison purposes to indicate when groundwater discharge has adversely affected surface water for the chlorinated VOCs, and/or a site-specific groundwater discharge concentration could be calculated for chlorinated VOCs and explosives to serve as an indicator before groundwater discharge adversely impacts surface water such that it causes an unacceptable risk to Turkey Creek ecological and human receptors.

An MCS for TCE in subsurface soil was identified for the protection of groundwater. The potential sources of MCSs considered for TCE in subsurface soil include the IDEM screening level for migration to groundwater as presented in Appendix A of the Remediation Closure Guidance (2015) and the MCL-based Soil Screening Level provided in the USEPA Regional Screening Levels for Chemical Contaminants at Superfund Sites (June 2015) adjusted to be representative of a dilution attenuation factor of 20. The values for TCE from both of these sources are the same; therefore, the selected subsurface soil MCS for TCE is 36 µg/kg.

An MCS for TCE in indoor air of 8.8 $\mu g/m^3$ for a commercial/industrial building have been identified to be protective of the current VI pathway at B146. The MSC is as presented in the Appendix A of the Remediation Closure Guidance (IDEM, 2015). Although no current unacceptable risks were identified for site workers when using the available indoor air data collected from B146, an indoor MSC was developed for TCE to meet IDEM requirements because the maximum soil gas concentration (1,021 $\mu g/m^3$) beneath the B146 building was several orders of magnitude greater than the calculated USEPA target sub-slab soil gas concentration of 7 $\mu g/m^3$ (Tetra Tech, November 2014) and IDEM's indoor air action level of 8.8 $\mu g/m^3$ (2015) indicating that TCE could present a future unacceptable risk to indoor air if the B146 foundation were removed or if its integrity were compromised.

2.3 SCREENING OF CORRECTIVE MEASURE TECHNOLOGIES

Categories of general response actions that could be implemented to satisfy or address a component of the CAOs were screened based on the site characteristics, COC characteristics, and technology limitations. As discussed in Section 1.2, active treatment technologies for groundwater were eliminated during the screening process as treatment is not necessary because the remaining potential ongoing sources of contamination were removed during the 2013 to 2014 IM, there are no current unacceptable risks under the current land use, which is not likely to change in the future, and LUCs are readily implementable and maintained at NSA Crane. Mission-critical operations in B146 restrict accessibility of the building for limited excavation beneath the building or for potential in-situ treatment of soil beneath the building. However, excavation of residual contaminated soil under the building was retained for evaluation if mission-critical operations are discontinued or suspended at some future time. Active treatment technologies for soil were eliminated during the screening process because these would potentially disturb mission-critical activities within B146, and based on the soil types, depth of contamination, and amount of contaminated soil would not provide a cost benefit once contaminated soil is accessible (i.e., at a time when mission-critical activities have been discontinued and the building structure has been removed). Although treatment has been screened out for this CMS, at such time that mission-critical activities in B146 are discontinued or suspended, the Navy may re-evaluate options to address soil contamination based on the conditions at the site at that time.

Based on the initial screening of general response actions, the following general response action categories were retained for further consideration at SWMU 16:

- No Action
- Limited Action (Institutional Controls and Monitoring)
- Removal

Limited action for groundwater was identified because of the presence of COC degradation products in groundwater indicating that degradation is already occurring naturally at the site. Removal was identified for soil because it is the most likely feasible remedial option for soil based on the soil types and depth of soil contamination.

2.4 IDENTIFICATION OF CORRECTIVE MEASURE ALTERNATIVES

Based on the screening of technologies in Section 2.3, two alternatives in addition to a no action alternative were developed using LUCs to prevent exposure to contamination until COC concentrations are less than MCSs. LUCs refer to any restriction or administrative action, including engineering controls (e.g., constructed containment barrier) and institutional controls (e.g., administrative and legal controls) that help minimize risk to human health and the environment.

The corrective measure alternatives considered for corrective action of soil and groundwater at SWMU 16 include:

- Alternative 1 – No Action
- Alternative 2 – MNA and LUCs
- Alternative 3 – Source Reduction, MNA, and LUCs

Table 2-3 summarizes site risks and identifies potential corrective measures on a medium-specific basis.

2.4.1 <u>Alternative 1 – No Action</u>

Alternative 1 is a no action alternative. No corrective measure would be performed to protect human health or the environment. This alternative is used as a baseline for comparison with other alternatives.

2.4.2 Alternative 2 – MNA and LUCs

Alternative 2 would include a combination of MNA; LTM of indoor air, groundwater, and downgradient surface water at SWMU 16; LUCs; and seven-year reviews. It was developed as an alternative that relies on natural attenuation processes to achieve groundwater MCSs, an LTM program to evaluate the stability of the groundwater contaminant plume, and LUCs to meet CAOs 2 and 3 until COC concentrations are less than groundwater MCSs. The natural processes include a variety of physical, chemical, and biological processes that act to reduce the mass, toxicity, mobility, volume, or concentration of contaminants in groundwater. This alternative was identified for SWMU 16 because existing groundwater data indicate that natural attenuation of chlorinated VOCs and explosives is already occurring, as indicated by the presence of degradation products, and that sources of contamination to groundwater, with the exception of TCE-contaminated soil under the B146 floor, were removed as part of the 2013 to 2014 IM. Remaining contaminated soil under B146 is not subject to precipitation by infiltration because of the concrete floor and foundation. The concrete floor is also preventing TCE in soil gas under the building from migrating into B146 and adversely impacting indoor air concentrations. Alternative 2 would address CAOs 1 and 2 through LUCs and LTM instead of reducing COC concentrations to meet the subsurface soil and VI (groundwater and indoor air) MCSs.

For purposes of planning and costing, the time required to reduce COC concentrations to groundwater MCSs was estimated using the 2003 to 2007 groundwater data. TCE concentrations in groundwater were the greatest compared to MCSs and so TCE was used for the basis of the estimation. A calculation using 16MWT06 (located near the east settling tank and east of the north settling tank), which had the maximum detections of TCE over the 2003 to 2007 sampling period (generally greater than 100,000 µg/L), is provided in Appendix B.1, and it estimates that it would take 73 years for TCE to be decrease to the MCS in this well. There is significant uncertainty in this estimate, especially because post-IM groundwater data are not available to evaluate groundwater concentrations after removal of contaminated soil outside the B146 footprint and removal of the settling tanks. At 16MWT13 (located near the west settling tank), TCE concentrations decreased from 62,000 µg/L to less than 500 µg/L from 2003 to 2007. For evaluation of alternatives, it was assumed that MCSs in groundwater would be met within 30 years, and 30-year net present worth (NPW) costs were developed for comparison of alternatives. However, to see the potential effect on costs, the cost estimate in Appendix B.2 also provides cost estimates for longer durations of LTM that might be required to meet groundwater MCSs (within 75 years) and longer-term LUCs required for TCE-contaminated soil under the B146 floor (greater than 100 years).

Under Alternative 2, LTM of groundwater and surface water would include sampling and analysis to determine the effectiveness of natural attenuation, to confirm that groundwater COCs are not migrating to surface water at unacceptable levels, and to determine when the groundwater MCSs have been attained. LTM of indoor air at B146 would include developing a VI monitoring program to confirm that TCE in soil gas is not migrating into B146 resulting in indoor air concentrations greater than the MCS. A Sampling and Analysis Plan (SAP) would be prepared to provide the required LTM sampling program and decisions based on the sampling results, including the number of sampling locations, frequency of monitoring, analytical program and decision rules that will be used to modify the frequency, media, and analytical program. For CMS costing purposes, several assumptions were made regarding the LTM program. The principal assumption was that the groundwater and surface water monitoring program described in the MNA study would be the basis for the LTM program. Samples would be collected biennially and analyzed for chlorinated VOCs, explosives, and natural attenuation indicator parameters. Based on MNA sampling for SWMU 16 and LTM programs at other NSA Crane sites, biennial sampling and analysis is expected to be sufficient to observe groundwater concentration trends and potential changes in the stability of the groundwater plume. For the air monitoring portion, it was assumed that two rounds of VI sampling similar to the 2014 sampling program would be conducted in the first year and that subsequent VI sampling would be conducted every 7 years (beginning in Year 7) as part of the seven-year review process.

Several LUCs would be implemented under Alternative 2. LUCs would be implemented to ensure that contaminated groundwater is not used as a source of drinking water until groundwater MCSs are attained. LUCs would also restrict future construction or modification of inhabitable buildings until groundwater MSCs are met or VI mitigation measures are implemented for the building. LUCs would be implemented to require inspection of the B146 floor to ensure that the floor remains in place and that the integrity has not been compromised such that water could migrate through the floor to underlying TCE-contaminated soil and adversely impact groundwater or such that soil gas could migrate through the floor and adversely impact TCE concentrations in indoor air at B146. Site inspections would be performed to verify the continued maintenance of LUCs. The future building restrictions for VI and site inspections associated with monitoring the integrity of the floor slab would be needed in perpetuity unless additional evaluations or actions are completed to demonstrate that the VI pathway for B146 and future inhabitable structures and the soil-to-groundwater migration pathway beneath B146 are no longer a concern. A LUC Implementation Plan (LUCIP) would be prepared to provide the specific LUC requirements and formalize the management of site controls. LUCs would be established in the Naval Installation Restoration Information Solution (NIRIS) LUC Tracker and appropriate NSA Crane documents, as specified in the LUCIP. For CMS costing purposes, it was assumed that annual LUC inspections would be conducted, which is consistent with inspections for other NSA Crane sites with LUCs.

Seven-year reviews would be conducted to verify the long-term reliability and effectiveness of this alternative and to provide direction for further corrective measure, if deemed necessary.

The details of the LTM and LUCs would be provided in a Corrective Measure Implementation Plan (CMIP)/Quality Assurance Project Plan (QAPP), which would include the LUCIP and SAP.

2.4.3 Alternative 3 – Source Reduction, MNA, and LUCs

Alternative 3 would include the MNA, LTM, and LUC components described in Alternative 2 in addition to soil source reduction. It was developed as an alternative that relies on natural attenuation to achieve groundwater MCSs and LUCs to ensure that the B146 floor remains in place until contaminated soil underlying B146 is assessable for removal, which for this alternative is assumed would be at some point before groundwater MCSs are met. Because mission-critical operations in B146 currently cannot be disrupted, for costing purposes, it was assumed that soil would be accessible in Year 28 and that groundwater would meet MCSs by Year 30 (see Section 2.4.2). Under Alternative 3, after soil removal is completed, LUCs for the B146 floor and the air monitoring component of the LTM program would be discontinued, and remaining LUCs and LTM would be discontinued after groundwater MCSs were met. As discussed under Alternative 2, although a 30-year NPW was used to evaluate alternatives, NPW costs were also estimated assuming that groundwater MCSs were not met until later.

The soil source reduction under Alternative 3, assumes that approximately 2,700 cubic yards of TCE-contaminated soil beneath B146, as shown on Figure 2-3, would be excavated. The total excavation area is approximately 12,000 square feet (based on an approximate 80-foot by 150-foot area), and the average depth of excavation is 6 feet bgs (to the top of bedrock). This alternative assumes that B146 has been removed and that underlying soil is readily accessible, and therefore, excavation would be used to remove the contamination rather than an in-situ treatment option. In addition, it assumes that no removal or replacement of structures or concrete foundation would be required after soil excavation. Disposal characterization samples would be collected prior to excavation. Because most of the previously excavated TCE-contaminated soil was determined to be non-hazardous and the maximum detection of TCE in soil under B146 was 9,000 µg/kg, the soil under the foundation is assumed to be non-hazardous. Soil with TCE concentrations greater than the soil MCS would be excavated and transported to a licensed TSDF for appropriate off-site disposal. Prior to excavation, the limits of excavation would be confirmed by sampling. Excavated areas would be backfilled with clean soil, and the surface would be seeded with grass. Details of the soil removal requirements would be presented in a CMIP.

TABLE 2-1

GROUNDWATER, SURFACE WATER, AND SEDIMENT SAMPLE RESULTS SUMMARY FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNDS
SWMU 16 – CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR
NSA CRANE, CRANE, INDIANA

Parameter	GW-PUZ (UG/L)					GW-PMZ (UG/L)					GW-PLZ/VALLEY (UG/L)				
	Frequency of Detection	Range of Detections	Range of Non-Detects	Sample Containing Maximum Detection	Sample Date	Frequency of Detection	Range of Detections	Range of Non-Detects	Sample Containing Maximum Detection	Sample Date	Frequency of Detection	Range of Detections	Range of Non-Detects	Sample Containing Maximum Detection	Sample Date
EXPLOSIVES															
1,3,5-TRINITROBENZENE	7/72	1.8-9.6	0.21-0.55	16GWT0610	4/26/2007	0/31	-	0.135-0.65			0/23	-	0.24-2.71		
2,4,6-TRINITROTOLUENE	7/72	4.1-33	0.21-0.55	16GWT0610	4/26/2007	0/31	-	0.135-0.65			0/23	-	0.24-2.71		
2,4-DIAMINO-6-NITROTOLUENE	3/25	0.27-1.3	0.24-0.29	16GWT0607	8/12/2005	0/11	-	0.25-0.278			0/8	-	0.248-0.316		
2,4-DINITROTOLUENE	7/72	0.68-4.6	0.21-0.55	16GWT0610	4/26/2007	0/31	-	0.135-0.65			0/23	-	0.24-2.71		
2,6-DINITROTOLUENE	5/72	0.52-2.5	0.21-0.55	16GWT0610	4/26/2007	0/31	-	0.135-0.65			0/23	-	0.24-2.71		
2-AMINO-4,6-DINITROTOLUENE	24/72	0.25-150	0.21-0.55	16GWT0610	4/26/2007	0/31	-	0.135-0.65			0/23	-	0.24-2.71		
2-NITROTOLUENE	0/72	-	0.21-0.55			1/31	1-1	0.135-0.65	16GWT1602	8/27/2004	0/23	-	0.24-2.71		
3,5-DINITROANILINE	0/25	0.56-0.56	0.24-0.29	16GWT1705-D	8/14/2005	0/11	-	0.25-0.278			0/8	-	0.248-0.316		
3-NITROTOLUENE	11/72	0.33-2.9	0.21-1.25	16GWT0610	4/26/2007	0/31	-	0.135-0.65			0/23	-	0.24-2.71		
4-AMINO-2,6-DINITROTOLUENE	31/72	0.38-70	0.21-0.55	16GWT0610	4/26/2007	0/31	-	0.135-0.65			0/23	-	0.24-2.71		
DNX	1/25	0.63-0.63	0.24-0.29	16GWT0402	11/8/2003	0/11	-	0.25-0.278			0/8	-	0.248-0.316		
HMX	44/72	0.27-21	0.21-0.385	16GWT0402	11/8/2003	7/31	0.38-1.3	0.135-0.65	16GWT1201	11/21/2003	1/23	0.32-0.32	0.24-2.71	16GWT1108	4/28/2007
MNX	12/25	0.3-4.1	0.24-0.29	16GWT0402	11/8/2003	0/11	-	0.25-0.278			0/8	-	0.248-0.316		
RDX	55/72	0.42-200	0.195-0.298	16GWT0402	11/8/2003	11/31	0.58-4.8	0.13-0.6	16GW0501	4/22/2003	0/23	-	0.24-2.71		
VOLATILE ORGANIC COMPOUNDS															
1,1,1,2-TETRACHLOROETHANE	2/73	0.6-0.99	0.3-120	16GWT0610	4/26/2007	0/31	-	0.3-1			0/22	-	0.3-30		
1,1,2,2-TETRACHLOROETHANE	6/73	1.6-6.5	0.3-120	16GWT0610	4/26/2007	0/31	-	0.3-1			0/22	-	0.3-30		
1,1,2-TRICHLOROETHANE	21/73	0.96-360	0.3-120	16GWT0610	4/26/2007	0/31	-	0.3-1			0/22	-	0.3-30		
1,1-DICHLOROETHENE	16/73	0.5-310	0.3-120	16GWT0610	4/26/2007	0/31	-	0.3-1			0/22	-	0.3-30		
1,2,3-TRICHLOROPROPANE	2/73	0.6-1.1	0.3-120	16GWT0610	4/26/2007	0/31	-	0.3-1			0/22	-	0.3-30		
1,2-DICHLOROETHANE	3/73	0.6-2.4	0.3-120	16GWT0608	1/8/2006	0/31	-	0.3-1			0/22	-	0.3-30		
2-HEXANONE	3/73	1.4-16	0.5-200	16GWT0603	11/8/2003	0/31	-	0.5-5			0/22	-	0.5-50		
4-METHYL-2-PENTANONE	7/73	3.5-41	0.5-200	16GWT0606	5/7/2005	0/31	-	0.5-5			0/22	-	0.5-50		
ACETONE	9/66	0.5-33	0.5-200	16GWT0605, 16GWT0605	2/5/2005, 4/26/2007	1/23	1.3-1.3	0.5-5	16GW0409	4/25/2007	5/22	0.8-7.4	0.5-50	16GWT2101	10/16/2004
BENZENE	10/73	0.9-4.7	0.3-120	16GWT0606	5/7/2005	0/31	-	0.3-1			1/22	0.7-0.7	0.3-30	16GWT1501	12/6/2003
BROMODICHLOROMETHANE	1/73	0.8-0.8	0.3-120	16GWT0601	4/28/2003	0/31	-	0.3-1			0/22	-	0.3-30		
CARBON DISULFIDE	7/73	0.8-4.3	0.3-120	16GWT0603	11/8/2003	1/31	0.3-0.3	0.3-1	16GWT1601	11/22/2003	0/22	-	0.3-30		
CARBON TETRACHLORIDE	13/73	0.8-17	0.3-120	16GW0304	2/5/2005	0/31	-	0.3-1			0/22	-	0.3-30		
CHLOROFORM	33/73	0.6-21	0.3-120	16GWT0606, 16GWT0610	5/7/2005, 4/26/2007	0/31	-	0.3-1			5/22	0.8-16	0.3-30	16GWT1101	12/6/2003
CHLOROMETHANE	1/73	0.4-0.4	0.3-120	16GWT1307	5/5/2006	0/31	-	0.3-1			0/22	-	0.3-30		
CIS-1,2-DICHLOROETHENE	34/73	0.2-10000	0.3-1	16GWT0610	4/26/2007	2/31	0.3-0.3	0.3-1	16GW0401, 16GWT1601	4/23/2003, 11/22/2003	0/22	-	0.3-30		
DICHLORODIFLUOROMETHANE	0/73	-	0.3-120			0/31	-	0.3-1			0/22	-	0.3-30		
ETHANE	28/29	0.004-7.7	0.005-0.005	16GWT0603	11/8/2003	7/8	0.01-0.37	0.005-0.005	16GWT1201	11/21/2003	8/8	0.34-5.4	-	16GWT1801	1/25/2004
ETHENE	28/29	0.007-65	0.005-0.005	16GWT0603	11/8/2003	7/8	0.0093-0.12	0.005-0.005	16GWT1203	2/6/2005	8/8	0.06-0.41	-	16GWT1505	8/14/2005
ETHYLBENZENE	7/73	1.6-7.2	0.3-120	16GWT0610	4/26/2007	0/31	-	0.3-1			1/22	0.9-0.9	0.3-30	16GWT2101	10/16/2004
METHANE	29/29	0.032-440	-	16GWT0605	2/5/2005	8/8	0.34-11	-	16GWT1201	11/21/2003	8/8	540-9400	-	16GWT1503	2/5/2005
METHYLENE CHLORIDE	1/73	59-59	0.3-120	16GWT1301	11/22/2003	0/31	-	0.3-2			1/22	0.6-0.6	0.3-30	16GWT0801	12/6/2003
PROPIONITRILE	0/26	-	20-20			0/19	-	20-20			1/10	26-26	20-20	16GWT1501	12/6/2003
TETRACHLOROETHENE	13/73	0.6-330	0.3-120	16GWT0610	4/26/2007	1/31	0.3-0.3	0.3-1	16GWT1601	11/22/2003	0/22	-	0.3-30		
TOLUENE	11/73	0.5-690	0.3-60	16GWT0610	4/26/2007	0/31	-	0.3-1			1/22	1.3-1.3	0.3-30	16GWT2101	10/16/2004
TOTAL XYLENES	7/73	2.8-12	0.3-120	16GWT0610	4/26/2007	0/31	-	0.3-1			1/22	2.2-2.2	0.3-30	16GWT2101	10/16/2004
TRANS-1,2-DICHLOROETHENE	13/73	1-26	0.3-120	16GWT0610	4/26/2007	0/31	-	0.3-1			0/22	-	0.3-30		
TRICHLOROETHENE	66/73	0.33-740000	0.3-1	16GWT0610	4/26/2007	15/31	0.5-340	0.3-1	16GWT1602	8/27/2004	2/22	0.6-1.4	0.3-52	16GWT1507	5/8/2006
VINYL CHLORIDE	15/73	0.3-1100	0.3-60	16GWT0610	4/26/2007	0/31	-	0.3-1			0/22	-	0.3-30		

TABLE 2-1

GROUNDWATER, SURFACE WATER, AND SEDIMENT SAMPLE RESULTS SUMMARY FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNDS
SWMU 16 – CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR
NSA CRANE, CRANE, INDIANA

Parameter	SW-SUMP (UG/L)					SW-GULLY UPGRADIENT (UG/L)					SW-GULLY (UG/L)				
	Frequency of Detection	Range of Detections	Range of Non-Detects	Sample Containing Maximum Detection	Sample Date	Frequency of Detection	Range of Detections	Range of Non-Detects	Sample Containing Maximum Detection	Sample Date	Frequency of Detection	Range of Detections	Range of Non-Detects	Sample Containing Maximum Detection	Sample Date
EXPLOSIVES															
1,3,5-TRINITROBENZENE	0/3	-	0.42-0.8			0/3	-	0.25-0.26			0/27	-	0.24-0.28		
2,4,6-TRINITROTOLUENE	1/3	2.1-2.1	0.455-0.8	16SW0701	4/10/2003	0/3	-	0.25-0.26			0/27	-	0.24-0.28		
2,4-DIAMINO-6-NITROTOLUENE	NA	NA	NA	NA	NA	0/3	-	0.25-0.26			0/4	-	0.25-0.25		
2,4-DINITROTOLUENE	0/3	-	0.42-0.8			0/3	-	0.25-0.26			0/27	-	0.24-0.28		
2,6-DINITROTOLUENE	0/3	-	0.42-0.8			0/3	-	0.25-0.26			0/27	-	0.24-0.28		
2-AMINO-4,6-DINITROTOLUENE	1/3	0.86-0.89	0.455-0.8	16SW0701	4/10/2003	0/3	-	0.25-0.26			3/27	0.28-0.39	0.24-0.28	16SW3003	5/8/2005
2-NITROTOLUENE	0/3	-	0.42-0.8			0/3	-	0.25-0.26			1/27	0.6-0.6	0.24-0.28	16SW1003	5/8/2005
3,5-DINITROANILINE	NA	NA	NA	NA	NA	0/3	-	0.25-0.26			0/4	-	0.25-0.25		
3-NITROTOLUENE	0/3	-	0.42-0.8			0/3	-	0.25-0.26			0/27	-	0.24-0.28		
4-AMINO-2,6-DINITROTOLUENE	1/3	2.2-2.2	0.455-0.8	16SW0701	4/10/2003	0/3	-	0.25-0.26			5/27	0.44-0.94	0.24-0.28	16SW3006	5/4/2006
DNX	NA	NA	NA	NA	NA	0/3	-	0.25-0.26			0/4	-	0.25-0.25		
HMX	2/3	1.5-29000	0.42-0.55	16SW0101	4/1/2003	0/3	-	0.25-0.26			7/27	0.27-4.9	0.24-0.28	16SW3006	5/4/2006
MNX	NA	NA	NA	NA	NA	0/3	-	0.25-0.26			0/4	-	0.25-0.25		
RDX	3/3	2.9-88000	-	16SW0101	4/1/2003	0/3	-	0.25-0.26			7/27	0.29-24	0.24-0.28	16SW3001	10/26/2004
VOLATILE ORGANIC COMPOUNDS															
1,1,1,2-TETRACHLOROETHANE	0/3	-	0.3-0.3			0/3	-	0.3-0.3			0/31	-	0.3-0.3		
1,1,2,2-TETRACHLOROETHANE	0/3	-	0.3-0.3			0/3	-	0.3-0.3			0/31	-	0.3-0.3		
1,1,2-TRICHLOROETHANE	0/3	-	0.3-0.3			0/3	-	0.3-0.3			0/31	-	0.3-0.3		
1,1-DICHLOROETHENE	0/3	-	0.3-0.3			0/3	-	0.3-0.3			0/31	-	0.3-0.3		
1,2,3-TRICHLOROPROPANE	0/3	-	0.3-0.3			0/3	-	0.3-0.3			0/31	-	0.3-0.3		
1,2-DICHLOROETHANE	0/3	-	0.3-0.3			0/3	-	0.3-0.3			0/31	-	0.3-0.3		
2-HEXANONE	0/3	-	0.5-0.5			0/3	-	0.5-0.5			0/31	-	0.5-0.5		
4-METHYL-2-PENTANONE	0/3	-	0.5-0.5			0/3	-	0.5-0.5			0/31	-	0.5-0.5		
ACETONE	0/3	-	0.5-0.5			1/1	0.6-0.6	-	16SW2001	10/25/2003	5/30	0.5-2.8	0.5-0.5	16SW2701	11/2/2004
BENZENE	0/3	-	0.3-0.3			0/3	-	0.3-0.3			0/31	-	0.3-0.3		
BROMODICHLOROMETHANE	0/3	-	0.3-0.3			0/3	-	0.3-0.3			0/31	-	0.3-0.3		
CARBON DISULFIDE	0/3	-	0.3-0.3			0/3	-	0.3-0.3			0/31	-	0.3-0.3		
CARBON TETRACHLORIDE	0/3	-	0.3-0.3			0/3	-	0.3-0.3			0/31	-	0.3-0.3		
CHLOROFORM	1/3	2.4-2.5	0.3-0.3	16SW0202-D	12/6/2003	0/3	-	0.3-0.3			0/31	-	0.3-0.3		
CHLOROMETHANE	0/3	-	0.3-0.3			0/3	-	0.3-0.3			0/31	-	0.3-0.3		
CIS-1,2-DICHLOROETHENE	2/3	2.9-7.4	0.3-0.3	16SW0202-D	12/6/2003	0/3	-	0.3-0.3			5/31	0.6-3.4	0.3-0.3	16SW2901	11/11/2004
DICHLORODIFLUOROMETHANE	0/3	-	0.3-0.3			0/3	-	0.3-0.3			0/31	-	0.3-0.3		
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	0/3	-	0.3-0.3			0/3	-	0.3-0.3			0/31	-	0.3-0.3		
METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	0/3	-	0.3-0.3			0/3	-	0.3-0.3			0/31	-	0.3-0.3		
PROPIONITRILE	0/3	-	20-20			0/3	-	20-20			0/11	-	20-20		
TETRACHLOROETHENE	0/3	-	0.3-0.3			0/3	-	0.3-0.3			0/31	-	0.3-0.3		
TOLUENE	0/3	-	0.3-0.3			0/3	-	0.3-0.3			0/31	-	0.3-0.3		
TOTAL XYLENES	0/3	-	0.3-0.3			0/3	-	0.3-0.3			0/31	-	0.3-0.3		
TRANS-1,2-DICHLOROETHENE	0/3	-	0.3-0.3			0/3	-	0.3-0.3			0/31	-	0.3-0.3		
TRICHLOROETHENE	3/3	3.3-9.2	-	16SW0202-D	12/6/2003	0/3	-	0.3-0.3			10/31	0.8-26	0.3-0.3	16SW2901	11/11/2004
VINYL CHLORIDE	0/3	0.7-0.7	0.3-0.3	16SW0202-D	12/6/2003	0/3	-	0.3-0.3			0/31	-	0.3-0.3		

TABLE 2-1

GROUNDWATER, SURFACE WATER, AND SEDIMENT SAMPLE RESULTS SUMMARY FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNDS
SWMU 16 – CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR
NSA CRANE, CRANE, INDIANA

Parameter	SW-TCMS UPGRADIENT (UG/L)					SW-TCMS (UG/L)					SD-GULLY UPGRADIENT (MG/KG)				
	Frequency of Detection	Range of Detections	Range of Non-Detects	Sample Containing Maximum Detection	Sample Date	Frequency of Detection	Range of Detections	Range of Non-Detects	Sample Containing Maximum Detection	Sample Date	Frequency of Detection	Range of Detections	Range of Non-Detects	Sample Containing Maximum Detection	Sample Date
EXPLOSIVES															
1,3,5-TRINITROBENZENE	0/1	-	0.25			0/1	-	0.25			0/3	-	0.25-0.25		
2,4,6-TRINITROTOLUENE	0/1	-	0.25			0/1	-	0.25			0/3	-	0.25-0.25		
2,4-DIAMINO-6-NITROTOLUENE	0/1	-	0.25			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	0/1	-	0.25			0/1	-	0.25			0/3	-	0.25-0.25		
2,6-DINITROTOLUENE	0/1	-	0.25			0/1	-	0.25			0/3	-	0.25-0.25		
2-AMINO-4,6-DINITROTOLUENE	0/1	-	0.25			0/1	-	0.25			0/3	-	0.25-0.25		
2-NITROTOLUENE	0/1	-	0.25			0/1	-	0.25			0/3	-	0.25-0.25		
3,5-DINITROANILINE	0/1	-	0.25			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROTOLUENE	0/1	-	0.25			0/1	-	0.25			0/3	-	0.25-0.25		
4-AMINO-2,6-DINITROTOLUENE	0/1	-	0.25			0/1	-	0.25			0/3	-	0.25-0.25		
DNX	0/1	-	0.25			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HMX	0/1	-	0.25			1/1	0.32	-	16SW2401	10/8/2004	0/3	-	0.25-0.25		
MNX	0/1	-	0.25			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RDX	0/1	-	0.25			0/1	-	0.25			0/3	-	0.25-0.25		
VOLATILE ORGANIC COMPOUNDS															
1,1,1,2-TETRACHLOROETHANE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
1,1,2,2-TETRACHLOROETHANE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
1,1,2-TRICHLOROETHANE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
1,1-DICHLOROETHENE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
1,2,3-TRICHLOROPROPANE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
1,2-DICHLOROETHANE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
2-HEXANONE	0/1	-	0.5			0/1	-	0.5			0/3	-	0.0011-0.0012		
4-METHYL-2-PENTANONE	0/1	-	0.5			0/1	-	0.5			0/3	-	0.0011-0.0012		
ACETONE	NA	NA	NA	NA	NA	0/1	-	0.5			2/3	0.005-0.007	0.0011-0.0011	16SD1401	10/24/2003
BENZENE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
BROMODICHLOROMETHANE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
CARBON DISULFIDE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
CARBON TETRACHLORIDE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
CHLOROFORM	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
CHLOROMETHANE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
CIS-1,2-DICHLOROETHENE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
DICHLORODIFLUOROMETHANE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
PROPIONITRILE	0/1	-	20			0/1	-	20			0/3	-	0.0453-0.0493		
TETRACHLOROETHENE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
TOLUENE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
TOTAL XYLENES	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
TRANS-1,2-DICHLOROETHENE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
TRICHLOROETHENE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		
VINYL CHLORIDE	0/1	-	0.3			0/1	-	0.3			0/3	-	0.0011-0.0012		

TABLE 2-1

GROUNDWATER, SURFACE WATER, AND SEDIMENT SAMPLE RESULTS SUMMARY FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNDS
SWMU 16 – CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR
NSA CRANE, CRANE, INDIANA
PAGE 4 OF 4

Parameter	SD-GULLY (MG/KG)					SD-TCMS UPGRADIENT (MG/KG)					SD-TCMS (MG/KG)				
	Frequency of Detection	Range of Detections	Range of Non-Detects	Sample Containing Maximum Detection	Sample Date	Frequency of Detection	Range of Detections	Range of Non-Detects	Sample Containing Maximum Detection	Sample Date	Frequency of Detection	Range of Detections	Range of Non-Detects	Sample Containing Maximum Detection	Sample Date
EXPLOSIVES															
1,3,5-TRINITROBENZENE	0/14	-	0.25-0.25			0/1	-	0.25			0/1	-	0.25		
2,4,6-TRINITROTOLUENE	0/14	-	0.25-0.25			0/1	-	0.25			0/1	-	0.25		
2,4-DIAMINO-6-NITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	0/14	-	0.25-0.25			0/1	-	0.25			0/1	-	0.25		
2,6-DINITROTOLUENE	2/14	0.54-0.92	0.25-0.25	16SD1501	10/24/2003	0/1	-	0.25			0/1	-	0.25		
2-AMINO-4,6-DINITROTOLUENE	0/14	-	0.25-0.25			0/1	-	0.25			0/1	-	0.25		
2-NITROTOLUENE	0/14	-	0.25-0.25			0/1	-	0.25			0/1	-	0.25		
3,5-DINITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROTOLUENE	0/14	-	0.25-0.25			0/1	-	0.25			0/1	-	0.25		
4-AMINO-2,6-DINITROTOLUENE	0/14	-	0.25-0.25			0/1	-	0.25			0/1	-	0.25		
DNX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HMX	0/14	-	0.25-0.25			0/1	-	0.25			0/1	-	0.25		
MNX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RDX	1/14	0.27-0.27	0.25-0.25	16SD0301	4/1/2003	0/1	-	0.25			0/1	-	0.25		
VOLATILE ORGANIC COMPOUNDS															
1,1,1,2-TETRACHLOROETHANE	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		
1,1,2,2-TETRACHLOROETHANE	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		
1,1,2-TRICHLOROETHANE	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		
1,1-DICHLOROETHENE	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		
1,2,3-TRICHLOROPROPANE	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		
1,2-DICHLOROETHANE	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		
2-HEXANONE	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		
4-METHYL-2-PENTANONE	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		
ACETONE	6/10	0.003-0.069	0.000975-0.01	16SD2201	10/24/2003	0/1	-	0.0012			1/1	0.007	-	16SD1901	10/24/2003
BENZENE	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		
BROMODICHLOROMETHANE	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		
CARBON DISULFIDE	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		
CARBON TETRACHLORIDE	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		
CHLOROFORM	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		
CHLOROMETHANE	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		
CIS-1,2-DICHLOROETHENE	1/10	0.003-0.003	0.000948-0.00158	16SD1201	10/25/2003	0/1	-	0.0012			0/1	-	0.001		
DICHLORODIFLUOROMETHANE	1/10	0.002-0.002	0.000948-0.00158	16SD2701	10/7/2004	0/1	-	0.0012			1/1	0.022	-	16SD1901	10/24/2003
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		
METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	0/10	-	0.000948-0.006			0/1	-	0.0012			0/1	-	0.001		
PROPIONITRILE	0/10	-	0.0379-0.066			0/1	-	0.0473			0/1	-	0.0548		
TETRACHLOROETHENE	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		
TOLUENE	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		
TOTAL XYLENES	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		
TRANS-1,2-DICHLOROETHENE	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		
TRICHLOROETHENE	2/10	0.002-0.019	0.000948-0.00158	16SD2901	10/8/2004	0/1	-	0.0012			0/1	-	0.001		
VINYL CHLORIDE	0/10	-	0.000948-0.00158			0/1	-	0.0012			0/1	-	0.001		

TABLE 2-2

GROUNDWATER MEDIA CLEANUP STANDARDS AND COMPARISON TO SURFACE WATER CRITERIA
SWMU 16 - CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR
NSA CRANE, CRANE, INDIANA

Chemical of Concern	CAS No.	Groundwater MCS										Surface Water Criteria		
		Drinking Water				Vapor Intrusion				Selected Groundwater MCS (µg/L)	Basis	Aquatic - Acute(4) (µg/L)	Aquatic - Chronic(4) (µg/L)	Human Health WQS-OR(5) (µg/L)
		Maximum Contaminant Level(1) (MCL) (µg/L)	IDEM Tap Water SL(2) (IDEM TW) (µg/L)	Drinking Water MCS (µg/L)	Basis	IDEM Residential Vapor Exposure (IDEM RES) (µg/L)	IDEM Industrial Vapor Exposure (IDEM IND) (µg/L)	Vapor Intrusion MCS (µg/L)	Basis					
Volatile Organic Compounds														
Carbon Tetrachloride	56-23-5	5	5	5	MCL	6.5	28	6.5	IDEM RES	5	MCL	NAv	NAv	69.4
1,1-Dichloroethene (DCE)	75-35-4	7	7	7	MCL	300	1300	300	IDEM RES	7	MCL	NAv	NAv	NAv
cis-1,2-DCE	156-59-2	70	70	70	MCL	NAv	NAv	NAv	NAv	70	MCL	7,200	320	NAv
Tetrachloroethene (PCE)	127-18-4	5	5	5	MCL	110	470	110	IDEM RES	5	MCL	1,400	210	88.5
1,1,2-Trichloroethane (TCA)	79-00-5	5	5	5	MCL	11	46	11	IDEM RES	5	MCL	1,100	50	418
Trichloroethene (TCE)	79-01-6	5	5	5	MCL	9.1	38	9.1	IDEM RES	5	MCL	2,200	100	807
Vinyl Chloride	75-01-4	2	2	2	MCL	2.1	35	2.1	IDEM RES	2	MCL	11,000	480	5,246
Explosives / Energetics														
2,4,6-Trinitrotoluene (TNT)	118-96-7	NAv	9.8 N	9.8	IDEM TW	N/A	N/A	N/A	N/A	9.8	IDEM TW	NAv	NAv	NAv
2-Amino-4,6-dinitrotoluene	35572-78-2	NAv	39 N	39	IDEM TW	N/A	N/A	N/A	N/A	39	IDEM TW	NAv	NAv	NAv
4-Amino-2,6-dinitrotoluene	19406-51-0	NAv	39 N	39	IDEM TW	N/A	N/A	N/A	N/A	39	IDEM TW	NAv	NAv	NAv
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	NAv	7 C	7	IDEM TW	N/A	N/A	N/A	N/A	7	IDEM TW	NAv	NAv	NAv

CFR Code of Federal Regulations.
COC Chemical of concern.
IDEM Indiana Department of Environmental Protection.
MCS Media Cleanup Standard.
N/A Not applicable because chemical is not retained as a COC for this exposure pathway.
NAv Not available.
SL Screening levels.
µg/L Microgram per liter.

1 - MCLs. 40 CFR 141.61.
2 - IDEM Tap Water SLs are taken from the Remediation Closure Guide, Office of Land Quality, Appendix A, Table A-6 Screening Levels, 2015 update which are based on an MCL if available, otherwise based on 10-5 risk for carcinogens (C) and a hazard index of 1 for noncarcinogens (N). (IDEM, 2015)
3 - Vapor Exposure groundwater concentration presented in the Appendix A of IDEM Remediation Closure Guide, as updated in 2015 (IDEM, 2015).
4 - Surface water criteria for aquatic organisms were taken from Water Quality Aquatic Life Criteria for the Non-Great Lakes System Not Adoped Into Rules and Calculated Using the Methodologies at 327 IAC 2-1-8.2 and 8.3, June 2015.
5 - Indiana Water Quality Standards applicable to the Ohio River Drainage Basin (WQS - OR) were taken from Surface Water Quality Criteria for State Waters Except Waters of the State Within the Great Lakes System (327 IAC -1-6 to 2-1-8.0), which includes the Ohio River Drainage Basin.

TABLE 2-3

CORRECTIVE MEASURE EVALUATION PROCESS SUMMARY
SWMU 16 – CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR
NSA CRANE, CRANE, INDIANA

MEDIUM	INVESTIGATION STAGE			REMEDIAL ACTION EVALUATION PHASE		
	Document	Findings/Evaluations	Conclusions	Considerations	Evaluation/Conclusions	Corrective Measures
Soil Outside the B146 Foundation Footprint	RFI Report and MNA Report (Tetra Tech, March 2011 and July 2010)	• No unacceptable risks to human health (surface soil is 0 to 2 feet bgs and subsurface soil is 2 feet bgs to top of bedrock, which is generally less than bgs).	• No action.	• Risks were acceptable; therefore, no corrective measures are needed for this pathway.	• None required.	• None.
		• Unacceptable risks to terrestrial plants (direct contact) and soil invertebrates (ingestion of soil and food) caused by exposure to metals (antimony, copper, lead, and zinc) in surface soil.	• Proceed to CMS.	• IM removed metals-contaminated soil to meet ecological MCSs.	• Unacceptable ecological risks were mitigated, and no additional corrective measures are needed.	• None.
		• Unacceptable risks to insectivorous birds (incidental soil ingestion and ingestion) caused by exposure to lead and zinc in surface soil.	• Proceed to CMS.	• IM removed metals-contaminated soil to meet ecological MCSs.	• Unacceptable ecological risks were mitigated, and no additional corrective measures are needed.	• None.
		• Several chlorinated VOCs (including TCE) were detected in soil at concentrations exceeding soil-to-groundwater migration screening levels and were also detected in groundwater at unacceptable levels.	• Proceed to CMS.	• IM removed VOC-contaminated soil (based on TCE extent) to meet MCS for soil-to-groundwater pathway.	• Soil is no longer a potential source of contamination to groundwater, and no additional corrective measures are needed.	• None.
Soil Beneath the B146 Foundation Footprint	SWMU 16 VI Report (Tetra Tech, November 2014)	• No unacceptable risks to human health from potential VI into B146 based on indoor air concentrations. However, TCE concentrations in sub-slab soil gas samples were significantly greater than indoor air concentrations indicating the B146 concrete floor is preventing soil gas from adversely impacting indoor air from VI into the building. A potential future concern was identified if the integrity of B146 floor was compromised. Elevated soil gas concentrations were detected in soil beneath the floor in Bays 3, 4, and 5.	• Proceed to CMS	• Evaluate corrective measures for TCE-contaminated soil under the B146 floor, considering that mission-critical activities in B146 cannot be disrupted.	• Proceed to CMS to evaluate potential corrective measures to prevent TCE concentrations in soil gas from adversely impacting indoor air concentrations.	• LUCs as long as TCE contamination remains to include inspection to ensure the B146 floor remains intact and LTM of indoor air to ensure that indoor air at B146 is not adversely impacted, and/or removal of TCE-contaminated soil if it is accessible.
	RFI Report (Tetra Tech, March 2011)	• No unacceptable risks to human health or the environment identified for the direct contact pathway (surface and subsurface soil).	• No action.	• Risks are acceptable; therefore, no corrective measures are needed for this pathway.	• None required.	• None.
		• TCE concentrations in soil under the B146 concrete floor are greater than acceptable levels for soil-to-groundwater migration, and this contamination is a future potential concern if the integrity of the B146 floor, which is preventing water infiltration, is compromised.	• Proceed to CMS.	• Evaluate corrective measures for TCE-contaminated soil under the B146 floor, considering that mission-critical activities in B146 cannot be disrupted.	• Proceed to CMS to evaluate potential corrective measures to prevent TCE contamination from adversely impacting groundwater.	• LUCs as long as TCE contamination remains to include inspection to ensure the B146 floor remains intact and/or removal of TCE-contaminated soil if it is accessible.

TABLE 2-3

CORRECTIVE MEASURE EVALUATION PROCESS SUMMARY
SWMU 16 – CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR
NSA CRANE, CRANE, INDIANA

MEDIUM	INVESTIGATION STAGE			REMEDIAL ACTION EVALUATION PHASE		
	Document	**Findings/Evaluations**	**Conclusions**	**Considerations**	**Evaluation/Conclusions**	**Corrective Measures**
Groundwater	RFI Report (Tetra Tech, March 2011) and MNA Report (Tetra Tech, July 2010)	• Potential unacceptable risks for occupational workers, recreational users, and hypothetical future residents who may use site groundwater for drinking. The COCs are carbon tetrachloride, cis-1,2-DCE, PCE, 1,1,2-TCA, TCE, vinyl chloride, 2-amino-4,6-dinitrotoluene, 4-amino-2,6-dinitrotoluene, RDX, and TNT.	• Proceed to CMS.	• Groundwater beneath the site is not currently used and MNA evaluation indicated that COCs are degrading as evidenced by the presence of degradation products. IM eliminated potential source areas exterior to B146. The B146 floor acts as a cap to prevent infiltration of precipitation and serves to isolate the residual VOC source area beneath the building from precipitation (see Soil Beneath the B146 Foundation Footprint). Also, 1,1-DCE groundwater concentrations exceed MCLs and this chemical was added as a COC for use of groundwater for drinking. • Based on groundwater concentrations compared to IDEM vapor exposure groundwater concentrations, there are potential future unacceptable risks for indoor air to occupants of future constructed habitable buildings or modifying existing B146 as a result of VI from groundwater. The COCs are carbon tetrachloride, 1,1-DCE, cis-1,2-DCE, PCE, 1,1,2-TCA, TCE, and vinyl chloride.	• Based on pre-IM data, groundwater contamination is stable or decreasing. Potential ongoing sources of contamination to groundwater were removed during the IM. There is no current or likely future exposure to groundwater. Therefore, natural attenuation with LUCs would prevent unacceptable risks, without active treatment of groundwater. Groundwater monitoring is necessary to evaluate post-IM groundwater conditions. • Future construction of new buildings or modifications to B146 are unlikely. Evaluate corrective measures to prevent future unacceptable risks from VI for new/modified habitable structures.	• LUCs, MNA, and LTM as long as COC concentrations in groundwater exceed MCSs. LUCs will prevent use of groundwater for drinking and restrict future construction of buildings and MNA/LTM will provide data to evaluate post-IM groundwater conditions and effectiveness of natural attenuation. • See above bullet.
		• Groundwater discharges to drainage ditches and intermittent streams, which eventually discharge to Turkey Creek. There is a potential future concern if groundwater COC concentrations on site migrated to surface water such that they adversely impact surface water concentrations in the future (also see Surface Water).	• Proceed to CMS.	• No unacceptable risks have been identified for surface water even though groundwater concentrations are much greater than surface water screening levels.	• Groundwater monitoring is necessary to evaluate post-IM groundwater conditions and the potential for future adverse impact to surface water.	• See above bullet and Surface Water.
Surface Water	RFI Report (Tetra Tech, March 2011) and MNA Evaluation Report	• No unacceptable human health or ecological risks for direct contact with surface water. However, groundwater discharges to surface water and could have an adverse impact on surface water if COC concentrations in groundwater significantly increase.	• Address along with groundwater.	• No unacceptable risks have been identified for Turkey Creek, which is the primary receiving water body for all waters (surface or subsurface) flowing from SWMU 16. Drainage channels to Turkey Creek are typically dry, except for storm events. Turkey Creek locations have more frequent occurrences of flowing water; however, the section of Turkey Creek near SWMU 16 is dry for a good portion of the year.	• Existing data indicate that surface water has not been adversely impacted and concentrations are not anticipated to increase based on completion of IMs and MNA data. Surface water monitoring would confirm that groundwater migration is not resulting in increased surface water concentrations that cause unacceptable risks to human and ecological receptors of Turkey Creek.	• Include surface water monitoring as part of MNA and LTM to address groundwater risks.

TABLE 2-3

CORRECTIVE MEASURE EVALUATION PROCESS SUMMARY
SWMU 16 – CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR
NSA CRANE, CRANE, INDIANA

MEDIUM	INVESTIGATION STAGE			REMEDIAL ACTION EVALUATION PHASE		
	Document	Findings/Evaluations	Conclusions	Considerations	Evaluation/Conclusions	Corrective Measures
Sediment	RFI Report (Tetra Tech, March 2011)	• No unacceptable human health or ecological risks for direct contact with sediment. Elevated lead concentrations in several sediment samples from drainage ditches would not likely pose an adverse risk based on limited exposure because of the steep terrain and dense vegetation.	• No action.	• Risks are acceptable; therefore, no corrective measures are needed for this pathway.	• None required.	• None.

bgs	Below ground surface.
CMS	Corrective Measure Study.
COC	Chemical of concern.
DCE	Dichloroethene.
IDEM	Indiana Department of Environmental Management.
IM	Interim Measure.
LTM	Long-term monitoring.
LUCs	Land use controls.
MCL	Maximum Contaminant Level.
MCSs	Media Cleanup Standards.
MNA	Monitored natural attenuation.
PCE	Tetrachloroethene.
RDX	Hexahydro-1,3,5-trinitro-1,3,5-triazine.
RFI	RCRA Facility Investigation.
1,1,2-TCA	1,1,2-Trichloroethane.
TCE	Trichloroethene.
TNT	2,4,6-Trinitrotoluene.
VI	Vapor intrusion.
VOC	Volatile organic compound.

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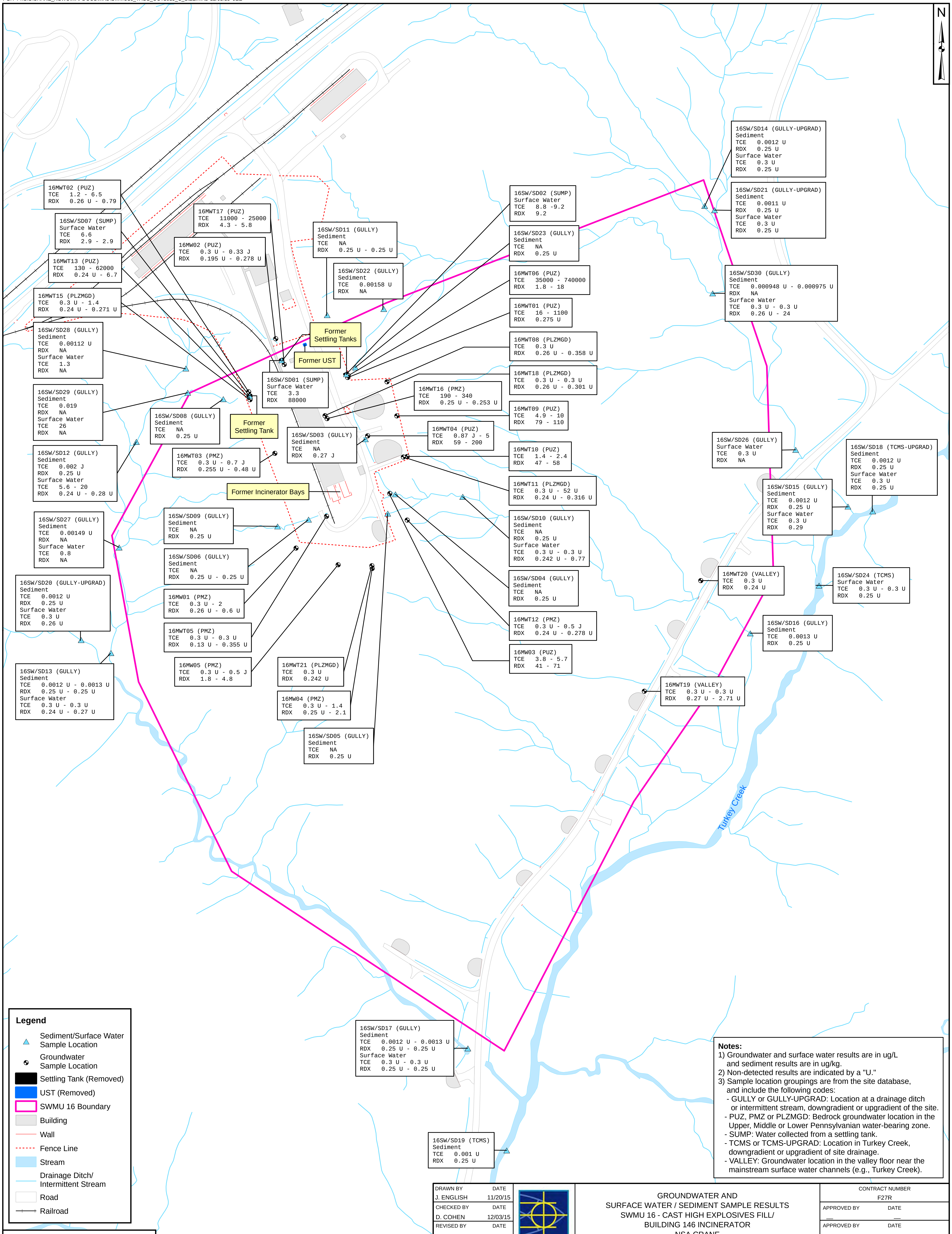

Notes:
1) Groundwater and surface water results are in ug/L and sediment results are in ug/kg.
2) Non-detected results are indicated by a "U."
3) Sample location groupings are from the site database, and include the following codes:
- GULLY or GULLY-UPGRAD: Location at a drainage ditch or intermittent stream, downgradient or upgradient of the site.
- PUZ, PMZ or PLZMGD: Bedrock groundwater location in the Upper, Middle or Lower Pennsylvanian water-bearing zone.
- SUMP: Water collected from a settling tank.
- TCMS or TCMS-UPGRAD: Location in Turkey Creek, downgradient or upgradient of site drainage.
- VALLEY: Groundwater location in the valley floor near the mainstream surface water channels (e.g., Turkey Creek).

DRAWN BY J. ENGLISH	DATE 11/20/15	NAVFAC	GROUNDWATER AND SURFACE WATER / SEDIMENT SAMPLE RESULTS SWMU 16 - CAST HIGH EXPLOSIVES FILL/ BUILDING 146 INCINERATOR NSA CRANE CRANE, INDIANA	CONTRACT NUMBER F27R	
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SCALE AS NOTED				FIGURE NO. FIGURE 2-1	REV 0

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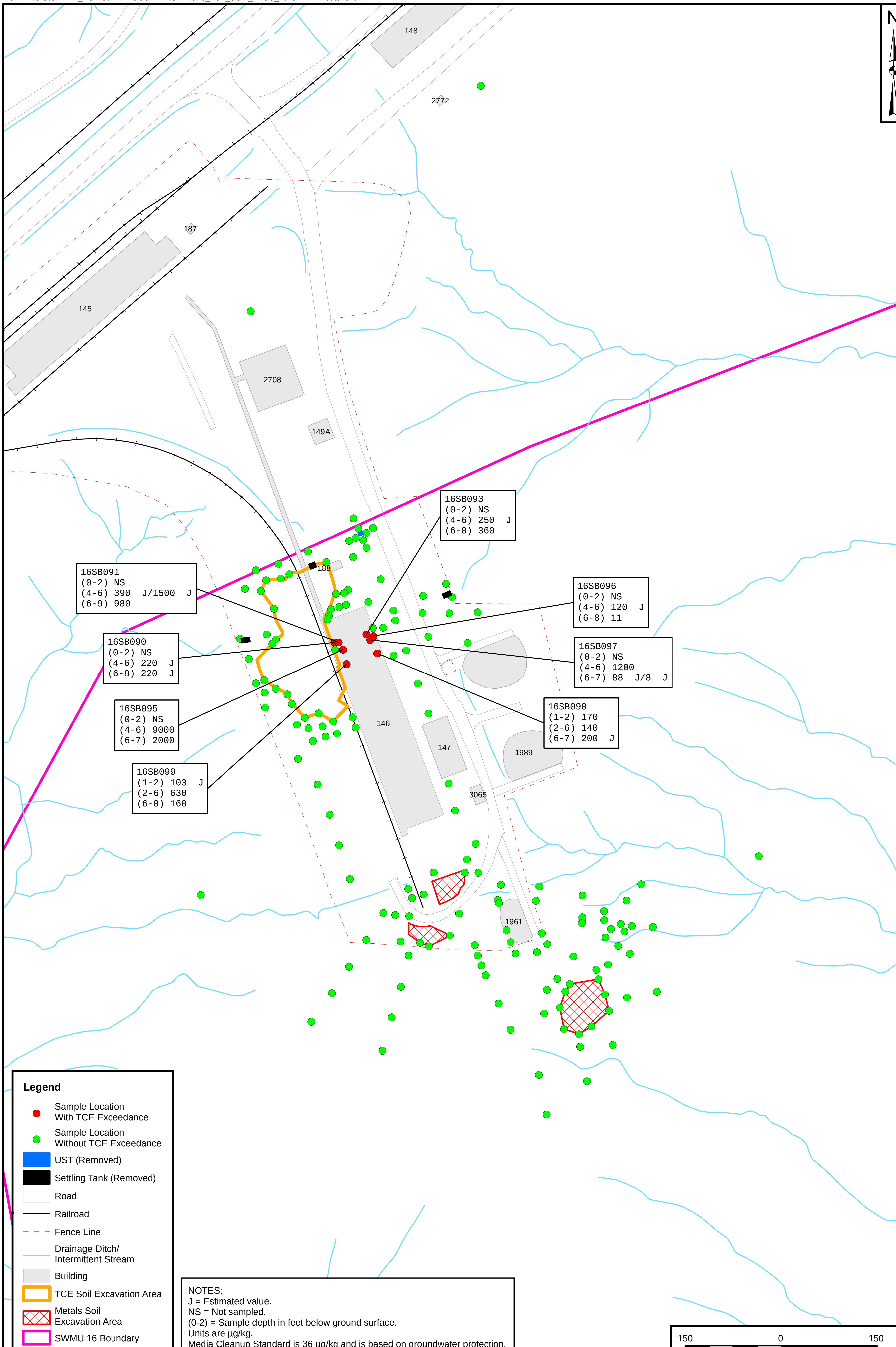

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K. MOORE	09/17/15
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D. COHEN	12/03/15
REVISED BY	DATE
J. ENGLISH	12/03/15
SCALE	
AS NOTED	

NAVFAC

EXCEEDANCES OF TRICHLOROETHENE
MEDIA CLEANUP STANDARD IN SOIL
SWMU 16 - CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER
F27R

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FIGURE NO. FIGURE 2-2

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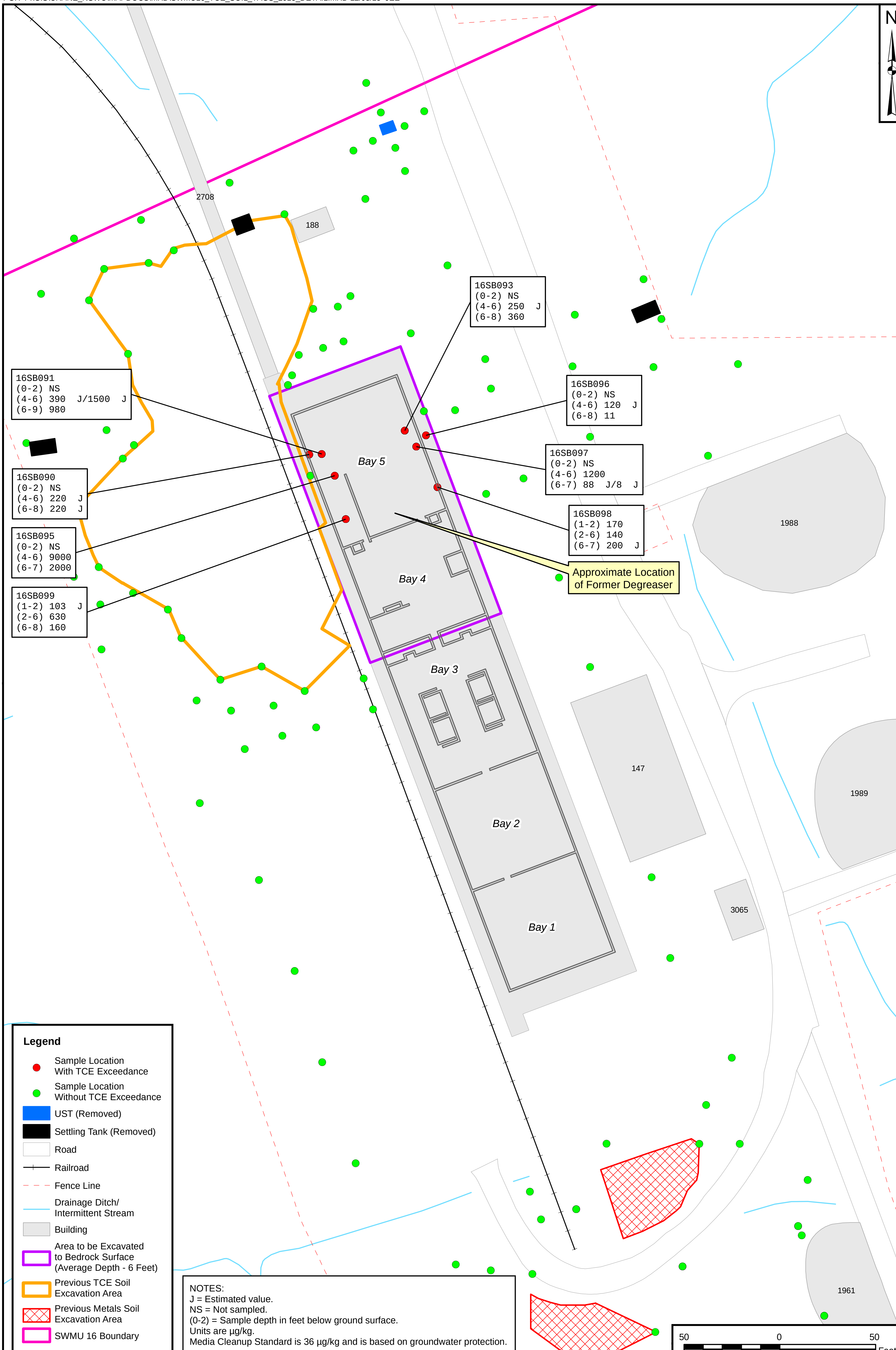

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CHECKED BY D. COHEN	DATE 12/03/15	
REVISED BY J. ENGLISH	DATE 12/03/15	
SCALE AS NOTED		

NAVFAC

TRICHLOROETHENE SOIL EXCAVATION AREA
UNDER ALTERNATIVE 3
SWMU 16 - CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER F27R	
APPROVED BY __	DATE __
APPROVED BY __	DATE __
FIGURE NO. FIGURE 2-3	REV 0

3.0 EVALUATION OF CORRECTIVE MEASURE ALTERNATIVES

The alternatives identified in Section 2.4 are evaluated in this section with respect to criteria presented in the RCRA Permit, Attachment 0, Task 7, Subtasks A and B. The evaluation criteria identified in the RCRA Permit include technical, environmental, human health, and institutional concerns, and cost estimates are also developed under Task 7.

Evaluation of the technical criterion includes evaluation of the performance, reliability, implementability, and safety of the alternative. As part of performance, the effectiveness and useful life of the corrective measures are considered. Information on reliability of the corrective measures includes consideration of operation and maintenance (O&M) requirements and availability of labor and materials to meet these requirements and potential for the alternative to fail and any impacts from failure. Implementability is evaluated in terms of relative ease of installation (constructability) and time required to achieve a given level of response based on time to implement and time to see beneficial results. Safety includes consideration of threats to nearby communities, the environment, and workers during implementation of the corrective measures.

Evaluation of the environmental criterion includes assessing facility conditions and pathways of contamination to be addressed by each alternative and evaluating short- and long-term beneficial and adverse impacts of the corrective measures on the environment, any potential adverse impacts on environmentally sensitive areas, and analysis of measures to mitigate adverse impacts if needed.

Evaluation of the human health criterion includes assessing the extent to which the corrective measures mitigate short- and long-term potential exposure to residual contamination and protect human health during and after implementation.

Evaluation of the institutional criterion includes assessing the effect of regulatory standards, guidance, and other requirements on the corrective measures.

Cost estimates consider both capital and O&M costs for the purposes of cost comparisons.

3.1 ALTERNATIVE 1 – NO ACTION

Under Alternative 1, no action would be taken to prevent exposure to contaminated groundwater at SWMU 16, to confirm the integrity of the B146 floor (through inspection and air monitoring), or to provide monitoring to evaluate natural degradation and reductions in groundwater contaminant concentrations.

3.1.1 Technical

Although no action is proposed under this alternative, current groundwater data indicate that natural attenuation, which relies on naturally occurring processes to reduce groundwater concentrations, is occurring at the site. Because there is no technology being implemented, there is no useful life to consider under this alternative. Also, there is no way to evaluate the effectiveness and reliability of natural attenuation because no data would be collected under this alternative. Alternative 1 would be readily implementable because no action would occur. Alternative 1 would involve no action; therefore, it would not pose any safety risks to on-site workers, the surrounding community, or the environment.

3.1.2 Environmental

Under Alternative 1, the groundwater MCSs would be expected to eventually be attained; however, no data would be collected to verify plume stability or when the MCSs are reached. There would be no adverse effect on the environment because there is no action under this alternative.

3.1.3 Human Health

This alternative would be protective of human health in the short term but not in the long term. The alternative would be protective of human health in the short term because there are no current users of site groundwater and the 2014 VI investigation showed that indoor air did not pose an unacceptable risk to workers in B146. Under current conditions, the B146 floor slab prevents migration of soil contamination to groundwater via precipitation infiltrating through underlying soil and prevents soil gas from adversely impacting indoor air such that risks to indoor air are unacceptable. However, Alternative 1 would not prevent future use of groundwater at SWMU 16 as a source of drinking water, which could result in unacceptable risks to human health in the future until MCSs are met. Also, Alternative 1 does not include monitoring to determine whether migration of COCs could adversely impact the groundwater contamination plume, surface water, or indoor air, and/or result in unacceptable human health or ecological risks in the future. Alternative 1 would not restrict future construction that could result in unacceptable risks from VI or require inspection or air monitoring to confirm the integrity of the B146 floor, where future failure (e.g., major cracking, settling) or removal of the slab could result in unacceptable risk to human health in the future through migration of contaminants from soil to groundwater and from VI.

3.1.4 Institutional

No actions would be implemented under Alternative 1; therefore, there are no institutional criteria to consider for this alternative.

3.1.5 Cost Estimate

There are no costs associated with the no action alternative.

3.2 ALTERNATIVE 2 – MNA AND LUCs

Under Alternative 2, a combination of MNA; LTM of groundwater, surface water, and indoor air; LUCs; and seven-year reviews would be conducted to prevent potential future unacceptable human health exposures at SWMU 16 and to monitor plume stability. Potential unacceptable risks identified in Section 2.1.2 include: (1) future occupational worker, recreational user, and hypothetical residential exposure to site groundwater (2) future industrial/commercial and hypothetical residential exposure to indoor air impacted by VI into B146 or newly constructed occupied building(s) and (3) future ecological and human exposure to the surface water of Turkey Creek.

3.2.1 Technical

Current data indicate that natural attenuation is occurring at the site, and under this alternative, LTM would verify the long-term effectiveness of natural attenuation and confirm plume stability. NSA Crane is a secured facility with the ability to enforce LUCs, making LUCs a reliable and effective way to prevent potential unacceptable exposures. The useful life of the components under this alternative is indefinite because natural attenuation relies on naturally occurring processes to reduce groundwater concentrations and because LUCs can be enforced and maintained indefinitely. Also, monitoring wells are typically functional for years but can be maintained or replaced as needed.

MNA has been applied at numerous sites and is considered a reliable technology provided that conditions favoring natural attenuation continue to be present. Naturally occurring processes require no O&M, making natural attenuation a very reliable technology. LUCs have been applied at numerous sites and implemented through LUCIPs or other existing facility-specific site use plans, and these plans are reliably enforced at active facilities such as NSA Crane. The reliability of the LUC component is contingent on LUCs being effective in preventing exposure until MCSs are met. The reliability of MNA combined with LUCs to reduce groundwater concentrations and prevent unacceptable exposures has been demonstrated at several NSA Crane sites.

Alternative 2 would be easy to implement because resources, materials, and equipment are readily available to implement LUCs and to perform LTM over the 30 years it is assumed for natural attenuation to reduce groundwater concentrations to the MCSs. Coordination with NSA Crane personnel would be necessary for inspection and air monitoring activities within B146 so that these activities do not disrupt mission-critical operations in the building.

There would be short-term safety and exposure risks associated with implementation of Alternative 2. Groundwater, surface water, and air sampling activities present certain inherent safety risks and present a potential exposure risk to COCs in these media for site workers during sample collection. The potential safety and exposure risks would be minimized by following health and safety procedures, including workers undergoing site-specific health and safety training prior to commencing field work and wearing personal protective equipment during sampling activities. Implementation of this alternative is expected to result in negligible short-term safety or exposure risks to the surrounding community.

3.2.2 Environmental

Alternative 2 would be expected to eventually attain groundwater MCSs, and LTM would verify when the MCSs are reached. Natural attenuation would not have an adverse effect on the environment because it relies on naturally occurring processes. As discussed in Section 1.5.1, the slopes around the B146 operational area are heavily vegetated, and threatened and endangered species or species of special concern protected under Indiana or federal regulations exist or may exist at SWMU 16. Any activity that would result in the clearing of woody vegetation at NSA Crane requires consultation under the Endangered Species Act. There are specific restrictions for tree removal at NSA Crane to protect the Indiana bat and its potential habitat (Tetra Tech, August 2013). Installation of any new monitoring wells and sampling of monitoring wells and surface water locations as part of a LTM program would not be expected to affect the environment or result in clearing of woody vegetation. The LTM component of this alternative would be protective of Turkey Creek because LTM data would be used to verify that groundwater discharges associated with adverse impacts to surface water do not cause unacceptable risk to Turkey Creek receptors.

3.2.3 Human Health

Alternative 2 would be protective of human health in the short term and long term. The alternative would be protective of human health in the short term because there are no current users of site groundwater, no current unacceptable surface water risks, and the 2014 VI investigation showed that indoor air concentrations were less than MCSs and did not pose an unacceptable risk to workers in B146. Under current conditions, the B146 floor slab prevents migration of soil contamination to groundwater from precipitation infiltrating through underlying soil and prevents soil gas from adversely impacting indoor air. This alternative would be protective of human health in the long term because LUCs would prevent future use of groundwater at SWMU 16 as a source of drinking water until MCSs are met and restrict future construction or modification of inhabitable buildings until groundwater MSCs are met or VI mitigation measures are implemented for the building. In addition, Alternative 2 would include LUCs that would require inspection and air monitoring to confirm the integrity of the B146 floor. LTM data would be evaluated to determine the need for additional corrective measures, as necessary, and to confirm plume stability until MCSs are met.

3.2.4 Institutional

No special permits would be anticipated for conducting LTM and implementing LUCs at SWMU 16. However, because of mission-critical operations in B146, notification and coordination with appropriate NSA Crane personnel would be required for any work in and around the building.

3.2.5 Cost Estimate

The following costs have been estimated for Alternative 2:

- Capital cost: $ 48,000
- O&M Annual Cost: $ 3,000
- Year 1 Air Sampling Cost: $ 44,000
- O&M Biennial Cost: $ 41,000
- Seven-Year Review: $ 55,000
- 30-Year NPW: $ 829,000

The above costs have been rounded to the nearest $1,000 to reflect the preliminary nature of these estimates. Two rounds of air monitoring would be conducted during Year 1, and one round of air monitoring would be conducted in association with the seven-year reviews. Detailed cost estimates for Alternative 2 are provided in Appendix B.2. If MCSs are not met within 30 years and continued LUCs and LTM are required, as shown in Appendix B.2, estimated 50-year, 75-year, and 100-year NPW costs are approximately $1.2 million, $1.5 million, and $1.7 million, respectively.

3.3 ALTERNATIVE 3 – SOURCE REDUCTION, MNA, AND LUCs

Under Alternative 3, a combination of soil removal; MNA; LTM of groundwater, surface water, and indoor air; LUCs; and seven-year reviews would be conducted to prevent potential unacceptable human health exposures at SWMU 16 and to confirm plume stability. Potential unacceptable risks identified in Section 2.1.2 include: (1) future occupational worker, recreational user, and hypothetical residential exposure to site groundwater (2) future industrial/commercial exposure and hypothetical residential to indoor air impacted by VI into B146 or newly constructed occupied building(s) and (3) future ecological and human exposure to the surface water of Turkey Creek.

3.3.1 Technical

Current data indicate that natural attenuation is occurring at the site, and excavation of soils with TCE concentrations greater than the MCS would eliminate future migration of TCE from soil to groundwater and soil to indoor air, and LTM would verify the long-term effectiveness of natural attenuation and confirm plume stability. NSA Crane is a secured facility with the ability to enforce LUCs, making LUCs a reliable and effective way to prevent potential unacceptable exposures. The useful life of the components under this alternative is indefinite because natural attenuation relies on naturally occurring processes to reduce groundwater concentrations, LUCs can be enforced and maintained until MCSs are met, and excavation requires no long-term O&M. Also, monitoring wells are typically functional for years but can be maintained or replaced as needed. Soil excavation would permanently remove all remaining TCE-contaminated soil from the site, eliminating the need to inspect and monitor the integrity of the B146 floor.

MNA has been applied at numerous sites and is considered a reliable technology provided that conditions favoring natural attenuation continue to be present. Excavation is a reliable method for removal of contaminated soil, and sampling and visual observations would be used to evaluate its effectiveness; however, mission-critical operations at B146 would need to be discontinued or suspended to allow for the soil excavation. Soil excavation and naturally occurring processes require no long-term O&M, making them very reliable technologies. LUCs have been applied at numerous sites and implemented through LUCIPs or other existing facility-specific site use plans, and these plans are reliably enforced at active facilities such as NSA Crane. The reliability of the LUC component is contingent on LUCs being effective in preventing exposure until MCSs are met. The reliability of excavation combined with MNA to reduce groundwater concentrations and LUCs to prevent unacceptable exposures has been demonstrated at several NSA Crane sites.

LUCs and LTM would be easy to implement because resources, materials, and equipment are readily available to implement LUCs and to perform LTM over the 30 years it is assumed for natural attenuation to reduce groundwater concentrations to MCSs. Coordination with NSA Crane personnel would be necessary for inspection and air monitoring activities within B146 so that these activities do not disrupt mission-critical operations in the building. Although resources, materials, and equipment are readily available to implement soil excavation, the soil excavation would be complicated by accessibility. Excavation activities could not be implemented until mission-critical operations at B146 are ceased or suspended. Multiple general and specialized contractors have the capability to perform the activities specified for this alternative.

There would be short-term safety and exposure risks associated with implementation of Alternative 3. Safety hazards associated with trenching and excavation work (e.g., cave-ins) can occur during construction activities if an unstable trench or excavation collapses. Groundwater, surface water, and air sampling activities would present certain inherent safety risks and present a potential exposure risk to COCs in these media for site workers during sample collection; no unacceptable risks associated with direct contact exposure to soils at the site were identified in the human health risk assessment presented in the RFI Report (Tetra Tech, March 2011). Potential safety and exposure risks would be prevented or minimized by following health and safety procedures, including workers undergoing site-specific health and safety training prior to commencing field work and wearing personal protective equipment during sampling activities. There would be a slight increase in risk to the surrounding community during transportation of excavated soil and backfill operations compared to soil remaining undisturbed at the site.

3.3.2 Environmental

The soil excavation and natural attenuation components of Alternative 3 would be expected to attain groundwater MCSs, and LTM would verify when the MCSs are reached and confirm plume stability. Soil excavation would benefit the environment by eliminating the soil-to-groundwater migration pathway for TCE. In addition, the LTM component of this alternative would be protective of Turkey Creek because LTM data would be used to verify that groundwater discharges associated with adverse impacts to surface water do not cause unacceptable risk to Turkey Creek receptors.

As discussed in Section 1.5.1, the slopes around the B146 operational area are heavily vegetated, and threatened and endangered species or species of special concern protected under Indiana or federal regulations exist or may exist at SWMU 16. Any activity that would result in the clearing of woody vegetation at NSA Crane requires consultation under the Endangered Species Act. There are specific restrictions for tree removal at NSA Crane to protect the Indiana bat and its potential habitat (Tetra Tech, August 2013). However, excavation activities are limited to a portion of the site that is developed and does not support sensitive receptor habitat. Installation of any new monitoring wells and sampling of monitoring wells and surface water locations as part of a LTM program would not be expected to affect the environment or result in clearing of woody vegetation. Natural attenuation would not have an adverse effect on the environment because it relies on naturally occurring processes.

3.3.3 Human Health

Alternative 3 would be protective of human health in the short term and long term. The alternative would be protective of human health in the short term because there are no current users of site groundwater, no current unacceptable surface water risks, and the 2014 VI investigation showed that indoor air concentrations were less than MSCs and did not pose an unacceptable risk to workers in B1416. Under current conditions, the B146 floor slab prevents migration of soil contamination to groundwater from precipitation infiltrating through underlying soil and prevents soil gas from adversely impacting indoor air.

This alternative would be protective of human health in the long term because LUCs would prevent future use of groundwater at SWMU 16 as a source of drinking water until MCSs are met and restrict future new construction or modification of inhabitable buildings until groundwater MSCs are met or VI mitigation measures are implemented for the building. In addition, soil excavation would eliminate potential unacceptable risks associated with the soil-to-groundwater pathway and soil-to-indoor air pathway, and LUCs that require inspection and air monitoring to confirm the integrity of the B146 floor would prevent future unacceptable risks for indoor air at B146 until the MSCs are met. LTM data would be evaluated to determine the need for additional corrective measures, as necessary, and to confirm plume stability until MCSs are met.

3.3.4 Institutional

No special permits would be anticipated for conducting LTM and implementing LUCs at SWMU 16. However, because of mission-critical operations in B146, notification and coordination with appropriate NSA Crane personnel would be required for any work in and around the building.

3.3.5 Cost Estimate

The following costs have been estimated for Alternative 3:

- Capital cost (Year 1): $ 48,000
- Capital cost (Year 28): $ 954,000
- O&M Annual Cost: $ 3,000
- Year 1 Air Sampling Cost: $ 44,000
- O&M Biennial Cost: $ 41,000
- Seven-Year Review: $ 55,000
- 30-Year NPW: $1,519,000

The above costs have been rounded to the nearest $1,000 to reflect the preliminary nature of these estimates. Soil source removal activities would be conducted when mission-critical operations are discontinued or suspended such that soil is assessable for removal, and it was assumed that these activities would be conducted in Year 28. Two rounds of air monitoring would be conducted during Year 1, and one round of air monitoring would be conducted in association with each seven-year review. Detailed cost estimates for Alternative 3 are provided in Appendix B.2. If MCSs are not met within 30 years and continued LUCs and LTM are required, as shown in Appendix B.2, estimated 50-year and 75-year NPW costs are approximately $1.8 million and $2.1 million.

4.0 JUSTIFICATION AND RECOMMENDATION OF CORRECTIVE MEASURES

This section provides the justification and recommendation of corrective measures at SWMU 16. Section 4.1 provides a comparison of the alternatives to the four criteria (technical, environmental, human health, and cost) specified in Task 8 of the RCRA Permit. Table 4-1 provides a summary of the comparison. Section 4.2 provides the recommended corrective measures and provides the rationale for the recommendation. This section meets the requirement of the NSA Crane RCRA Permit, Attachment 0, Task 8, Subtasks A to D.

4.1 JUSTIFICATION FOR CORRECTIVE MEASURES

Comparisons of the three alternatives with respect to the technical, environmental, human health, and cost criteria are provided in the following subsections.

4.1.1 <u>Technical</u>

Technical evaluations of all three alternatives indicate that natural attenuation is already occurring at the site and that the useful lives of the components of Alternatives 2 and 3 are indefinite, primarily because natural attenuation relies on naturally occurring processes to reduce groundwater concentrations. There is no useful life to consider under Alternative 1 because there is no technology being implemented. The reliability of Alternative 1 cannot be evaluated because no data would be collected to confirm groundwater concentration reductions. The components of Alternatives 2 and 3 have been proven to be reliable methods to reduce groundwater concentrations and prevent unacceptable exposures at other sites at NSA Crane. The reliability of Alternatives 2 and 3 is contingent on LUCs preventing exposure until MCSs are met.

The major differences identified under the technical evaluation of the alternatives are related to implementability and safety. There are no issues with implementation or safety under Alternative 1 because no action would occur. Alternative 2 would be more easily implemented than Alternative 3 due to the soil excavation component associated with Alternative 3. The soil excavation component would be complicated by accessibility and could not be implemented until mission-critical activities conducted in B146 were discontinued. Due to the mission-critical activities currently being conducted at B146, it was assumed that the excavation component could not be implemented until Year 28; therefore, there is no reduction in the amount of time for natural attenuation to achieve groundwater MCSs between Alternatives 2 and 3. The soil excavation component would also be associated with an increased safety risk to workers and the surrounding community identified for Alternative 3 compared to Alternative 2.

4.1.2 Environmental

Although the site and surrounding B146 area contain habitat that could support threatened and endangered species or species of special concern, activities associated with the natural attenuation, LTM, and excavation components under Alternatives 2 and 3 are not expected to negatively affect sensitive receptor habitat. Natural attenuation would not have an adverse effect on the environment or potential sensitive receptors because it relies on naturally occurring processes. LTM activities would not be expected to negatively affect sensitive receptor habitat (i.e., no woody vegetation clearing). The contaminated soil that would be excavated under Alternative 3 is located underneath an existing building and limited to a portion of the site that is developed and does not support sensitive receptor habitat. The soil excavation component of Alternative 3 offers an added benefit to the environment of permanently preventing migration of TCE from soil to groundwater thereby preventing potential future increased groundwater contamination. The LTM components of Alternatives 2 and 3 would offer additional protection for Turkey Creek because the LTM data would be used to verify that groundwater discharges associated with adverse impacts to surface water do not cause unacceptable risk to Turkey Creek receptors.

4.1.3 Human Health

All three alternatives would be protective of human health in the short term because there are no current unacceptable risks at the site. Alternative 1 would not be protective of human health in the long term due to the lack of action to prevent future exposures. Alternatives 2 and 3 would offer similar protection of human health in the long term associated with implementation of LUCs, natural attenuation process reducing groundwater concentrations, and LTM to monitor groundwater plume stability and indoor air concentrations at B146. The soil excavation under Alternative 3 would offer some additional protection to prevent future groundwater and indoor air contamination; however, the excavation could be implemented until mission-critical activities at B146 cease, and the LUC component under Alternative 2 is protective in preventing exposures.

4.1.4 Cost

There is no cost associated with Alternative 1 because no action would occur. Alternative 3 (NPW of $1,519,000) is approximately 1.8 times more expensive than Alternative 2 (NPW of $829,000) due to the additional soil excavation component included under Alternative 3.

4.2 RECOMMENDATION OF CORRECTIVE MEASURES

The components of Alternative 2 (MNA, LTM of groundwater, LUCs, and seven-year reviews) are the recommended corrective measures for SWMU 16. Alternative 2 includes MNA and LTM of groundwater, indoor air, and surface water to address potential future unacceptable risks associated with exposure to groundwater and indoor air (as a result of VI) and to evaluate potential migration of groundwater to surface water. LUCs would be implemented to prevent exposure to groundwater and restrict construction of habitable buildings until the groundwater MCSs are met or VI mitigation measures are implemented, and to protect the integrity of the existing B146 floor to prevent contaminants in soil/soil gas beneath the floor slab from adversely impacting indoor air and the groundwater plume stability.

Alternative 1 was eliminated for consideration because it would not protect human health in the long term. The excavation component of Alternative 3 would disturb mission-critical activities at B146. Alternative 2 would pose less of a potential threat to the safety of surrounding community and the environment as well as workers during implementation compared to Alternative 3. Alternatives 2 and 3 were found to both be technically adequate and sufficiently protective of human health and the environment; therefore, per Attachment 0, Task 8, Subtask D of the RCRA Permit, the corrective measure alternative that costs the least (i.e., Alternative 2) has been selected as the recommended alternative for SWMU 16.

TABLE 4-1

SUMMARY OF COMPARATIVE ANALYSIS OF CORRECTIVE MEASURE ALTERNATIVES
SWMU 16 – CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR
NSA CRANE, CRANE, INDIANA

Evaluation Criterion	Alternative 1: No Action	Alternative 2: MNA and LUCs	Alternative 3: Source Reduction, MNA, and LUCs
Technical (Performance, Reliability, Implementability, and Safety)	Performance: Current data indicate that natural attenuation is occurring; however, there would be no way to evaluate the effectiveness of natural attenuation because no data would be collected. Because there is no technology being implemented, there is no useful life to consider. Reliability: There would be no way to evaluate the reliability of natural attenuation because no data would be collected. Implementability: Not applicable because no action would occur. Nothing would be implemented. Safety: No safety or exposure risks to workers or the surrounding community because no action would occur.	Performance: Current data indicate that natural attenuation is occurring, and LTM would verify the effectiveness of natural attenuation and confirm plume stability. NSA Crane is a secured facility, and LUCs could be reliably enforced. Useful life of the components is indefinite because natural attenuation relies on naturally occurring processes to reduce groundwater concentrations, and LUCs can be maintained indefinitely. Reliability: Naturally occurring processes require no O&M. MNA combined with LUCs has been demonstrated to be a reliable method at NSA Crane to reduce groundwater concentrations and prevent unacceptable exposures. Reliability would be contingent on LUCs being effective to prevent exposure until MCSs are met. Implementability: Resources, materials, and equipment are readily available to implement LUCs and perform LTM over the 30 years it is assumed to be required to meet MCSs. No special permits are anticipated for conducting LTM; however, coordination with NSA Crane personnel would be required for inspection and sampling activities. Safety: Short-term safety and exposure risks to workers conducting sampling activities; risks could be reduced by following H&S procedures. Negligible risks to surrounding community during soil excavation.	Performance: Current data indicate that natural attenuation is occurring, and LTM would verify the effectiveness of natural attenuation and confirm plume stability. Soil excavation would eliminate future migration of COCs to groundwater and indoor air. Useful life of the components is indefinite because the action relies on naturally occurring processes to reduce groundwater concentrations, and LUCs can be maintained until MCSs are met. Excavation does not require O&M. Reliability: Soil excavation and naturally occurring processes require no O&M. Excavation combined with MNA and LUCs has been demonstrated to be a reliable method at NSA Crane to reduce groundwater concentrations and prevent unacceptable exposures. Reliability would be contingent on LUCs being effective to prevent exposure until MCSs are met. Implementability: Resources, materials, and equipment are readily available to implement LUCs and soil excavation and perform LTM over the 30 years it is assumed to be required to meet MCSs. The soil excavation component could not be implemented until mission-critical operations at B146 cease. No special permits are anticipated for conducting LTM or LUCs; however, coordination with NSA Crane personnel would be required. Safety: Short-term safety and exposure risks to workers conducting sampling activities; risks could be reduced by following H&S procedures. Slight risks to surrounding community during soil excavation.

SUMMARY OF COMPARATIVE ANALYSIS OF CORRECTIVE MEASURE ALTERNATIVES
SWMU 16 – CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR
NSA CRANE, CRANE, INDIANA

Evaluation Criterion	Alternative 1: No Action	Alternative 2: MNA and LUCs	Alternative 3: Source Reduction, MNA, and LUCs
Environmental	No action would eventually attain groundwater MCS; however, no data would be collected to verify plume stability or when MCSs are reached. Natural attenuation would not have an adverse effect on the environment because it relies on naturally occurring processes.	Alternative would attain groundwater MCSs, and LTM would verify when MCSs are reached and confirm plume stability. The LTM component would offer protection for Turkey Creek because the LTM data would be used as an indicator to warn when additional action is needed to protect surface water receptors. The site and surrounding B146 operation area contain habitat that could support threatened and endangered species or species of special concern; however, natural attenuation would not have an adverse effect on the environment or potential sensitive receptors because it relies on naturally occurring processes. LTM activities would not be expected to negatively affect sensitive receptor habitat.	Alternative would attain groundwater MCSs, and LTM would verify when MCSs are reached and confirm plume stability. Excavation of soils would have an added benefit to the environment by permanently preventing migration of TCE from soil to groundwater. The LTM component would offer protection for Turkey Creek because the LTM data would be used as an indicator to warn when additional action is needed to protect surface water receptors. The site and surrounding B146 operation area contain habitat that could support threatened and endangered species or species of special concern; however, excavation activities are limited to a portion of the site that is developed and does not support sensitive receptor habitat and natural attenuation would not have an adverse effect on the environment or potential sensitive receptors because it relies on naturally occurring processes.. LTM activities would not be expected to negatively affect sensitive receptor habitat.

TABLE 4-1

SUMMARY OF COMPARATIVE ANALYSIS OF CORRECTIVE MEASURE ALTERNATIVES
SWMU 16 – CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR
NSA CRANE, CRANE, INDIANA

Evaluation Criterion	Alternative 1: No Action	Alternative 2: MNA and LUCs	Alternative 3: Source Reduction, MNA, and LUCs
Human Health	No action would be protective of human health in the short term because there are no current users of groundwater and no current unacceptable risks at the site. However, there would be no action to prevent future potential unacceptable risks associated with groundwater, surface water, VI, or the soil-to-groundwater migration pathway.	Alternative would be protective of human health in the short term and long term. Although there are no current unacceptable risks at the site, LUCs would prevent future exposure to contaminated groundwater and construction of habitable buildings until MCSs are met through MNA or VI mitigation measures are implemented. In addition, LUCs that require inspection and air monitoring to confirm the integrity of the B146 floor would prevent future unacceptable risks for indoor air for B146 receptors and the soil-to-groundwater migration pathway. LTM data would evaluate plume stability until MCSs are met and be used to determine if additional action is needed to prevent future unacceptable risks.	Alternative would be protective of human health in the short term and long term. Although there are no current unacceptable risks at the site, LUCs would prevent future exposure to contaminated groundwater and construction of habitable buildings until MCSs are met through MNA or VI mitigation measures are implemented. Soil excavation would mitigate potential future risks associated with the soil-to-groundwater pathway and soil-to-indoor air pathway for B146; LUCs that require inspection and air monitoring to confirm integrity of the B146 floor would prevent future unacceptable risks for indoor air and the soil-to-groundwater pathway until the MCSs are met. LTM data would evaluate plume stability until MCSs are met and be used to determine if additional action is needed to prevent future unacceptable risks.
Cost: Capital (Year 1) Capital (Year 28) Year 1 Air Sampling Annual Biennial Seven-Year NPW	 $0 $0 $0 $0 $0 $0	 $ 48,000 $ NA $ 44,000 $ 3,000 $ 41,000 $ 55,000 $829,000	 $ 48,000 $ 954,000 $ 44,000 $ 3,000 $ 41,000 $ 55,000 $1,519,000

COCs Chemicals of concern.
H&S Health and safety.
LTM Long-term monitoring.
LUCs Land use controls.
MCSs Media cleanup standards.
MNA Monitored natural attenuation.
NPW Net present worth.
O&M Operation and maintenance.
TCE Trichloroethene.

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APPENDIX A

SUPPORTING INFORMATION

APPENDIX A.1

EXCERPTS FROM THE MONITORED NATURAL ATTENUATION FINAL REPORT FOR SWMU 16 (TETRA TECH, JULY 2010)

Comprehensive **L**ong-term **E**nvironmental **A**ction **N**avy

CONTRACT NUMBER N62467-94-D-0888

Rev. 0
07/2010

Monitored Natural Attenuation Final Report

for

Cast High Explosives Fill/Building 146 (SWMU 16)

Round No. 9

Naval Surface Warfare Center Crane
Crane, Indiana

Contract Task Order 0377

July 2010

NAVFAC
Naval Facilities Engineering Command
Midwest
201 Decatur Avenue
Great Lakes, Illinois 60088

TETRA TECH NUS, Inc.

Rev. 0
07/2010

MONITORED NATURAL ATTENUATION
FINAL REPORT
FOR
CAST HIGH EXPLOSIVES FILL/BUILDING 146 (SWMU 16)

ROUND NO. 9

NAVAL SURFACE WARFARE CENTER, CRANE
CRANE, INDIANA

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

Submitted to:
Naval Facilities Engineering Command
Midwest
201 Decatur Avenue
Great Lakes, Illinois 60088

Submitted by:
Tetra Tech NUS, Inc.
661 Andersen Drive
Foster Plaza 7
Pittsburgh, Pennsylvania 15220

CONTRACT NUMBER N62467-94-D-0888
CONTRACT TASK ORDER 0377

JULY 2010

PREPARED UNDER THE SUPERVISION OF:

Ralph R. Basinski

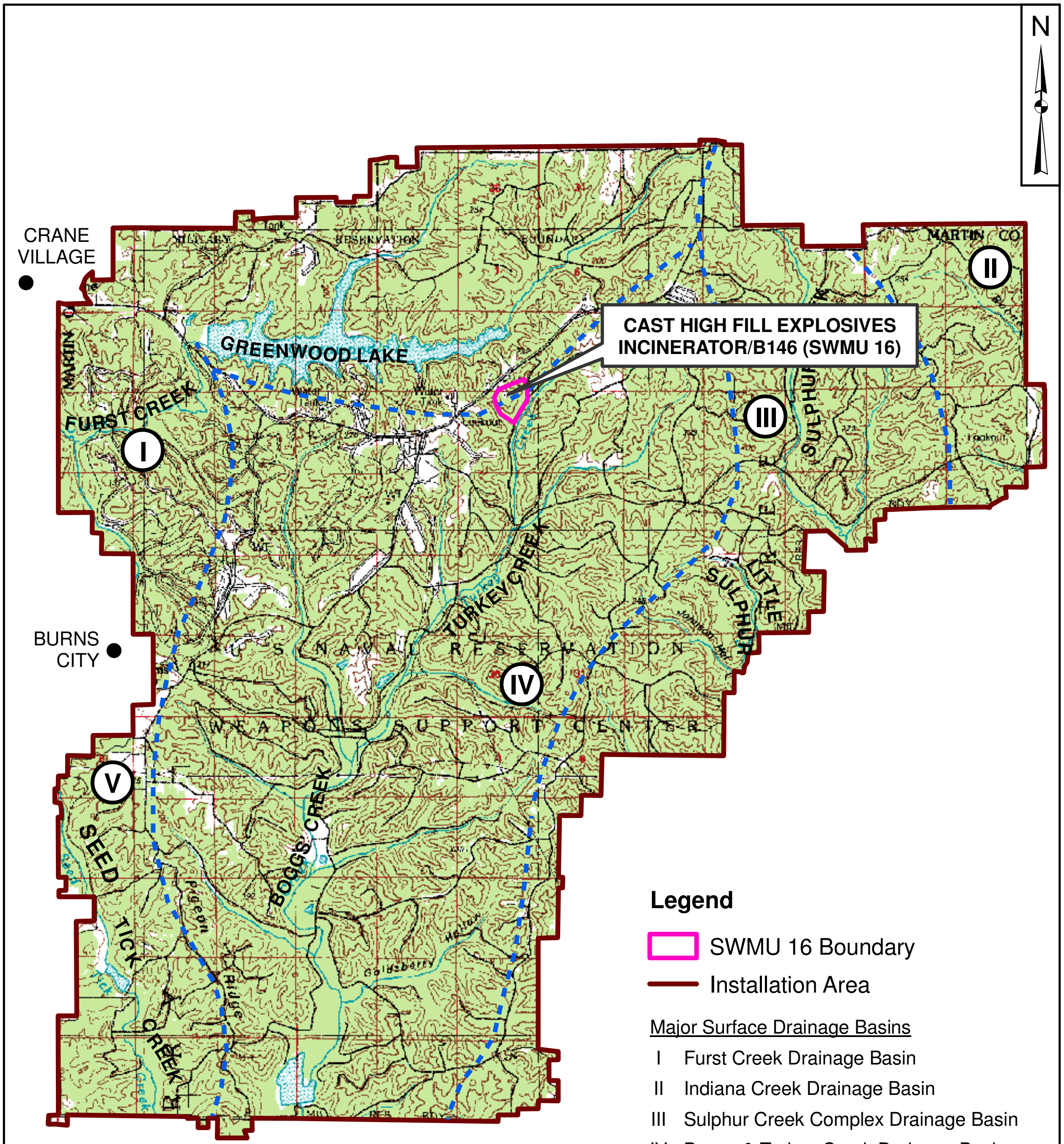
RALPH R. BASINSKI
TASK ORDER MANAGER
TETRA TECH NUS, INC.
PITTSBURGH, PENNSYLVANIA

APPROVED FOR SUBMITTAL BY:

Debra M Humbert

DEBRA M. HUMBERT
PROGRAM MANAGER
TETRA TECH NUS, INC.
PITTSBURGH, PENNSYLVANIA

P:\GIS\CRANE_NSWC\MAPDOCS\MXD\SWMU16_DRAINAGE.MXD 07/06/10 SS



Legend

SWMU 16 Boundary

Installation Area

Major Surface Drainage Basins

- I Furst Creek Drainage Basin
- II Indiana Creek Drainage Basin
- III Sulphur Creek Complex Drainage Basin
- IV Boggs & Turkey Creek Drainage Basin
- V Seed Tick Creek Drainage Basin

2 0 2 Miles

Source: "Initial Assessment of Study of Naval Weapons Support Center Crane, Indiana." Naval Energy and Environmental Support Activity, May 1983.

DRAWN BY S. STROZ — DATE 07/06/10	NAVFAC	SWMU 16 CAST HIGH EXPLOSIVES FILL/ BUILDING 146 INCINERATOR LOCATION AND DRAINAGE BASINS NSA CRANE CRANE, INDIANA	CONTRACT NUMBER 00041
CHECKED BY J. LUCAS — DATE 07/06/10			OWNER NUMBER —
REVISED BY — DATE —			APPROVED BY — DATE —
SCALE AS NOTED			FIGURE NO. FIGURE 1-1 — REV 0

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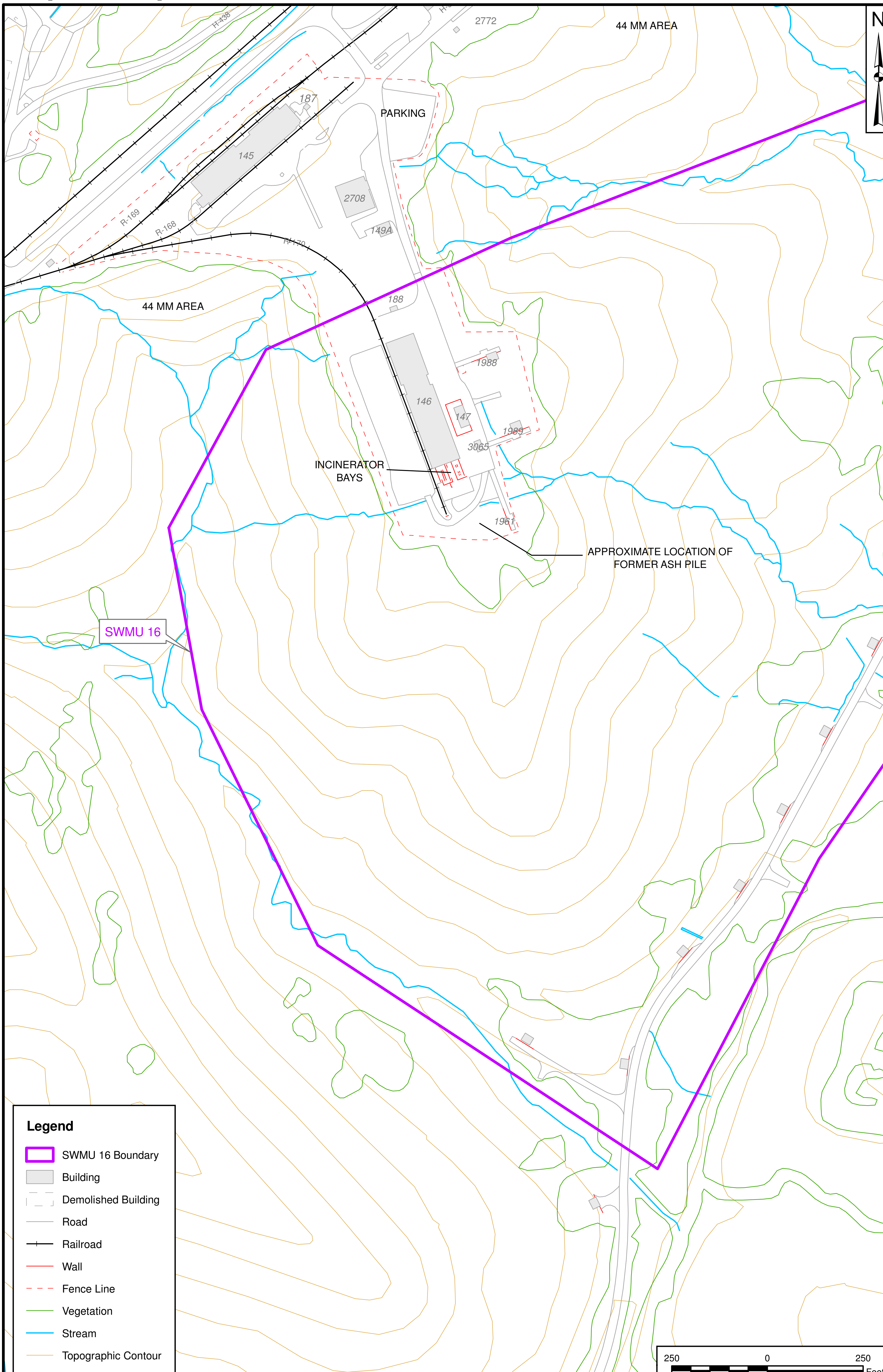
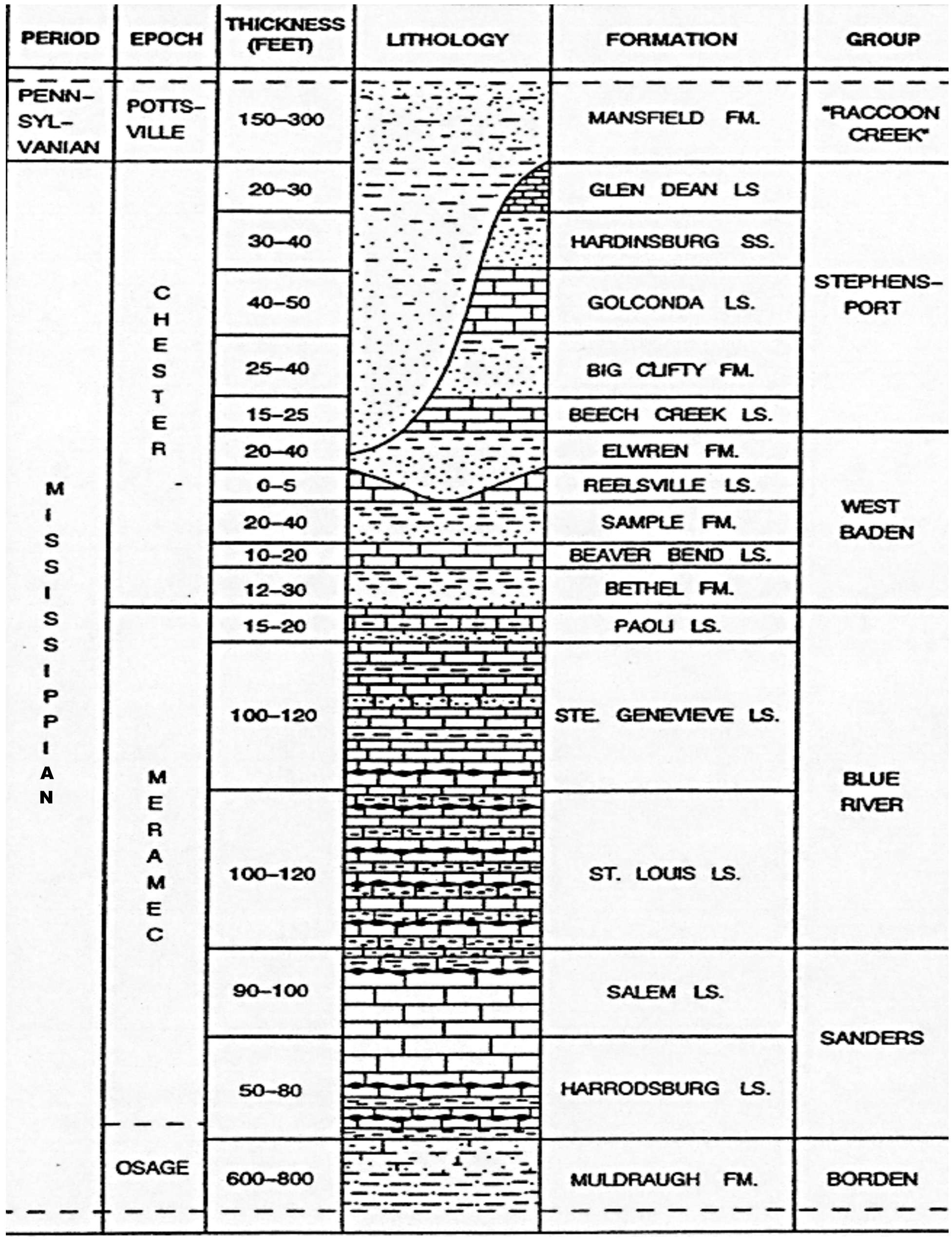


DRAWN BY S. STROZ	DATE 07/07/10	NAVFAC	SITE FEATURES	CONTRACT NUMBER 00041
CHECKED BY J. LUCAS	DATE 07/07/10		SWMU 16 - CAST HIGH EXPLOSIVES FILL / B146 INCINERATOR	APPROVED BY ___ DATE ___
REVISED BY ___	DATE ___		NSA CRANE	APPROVED BY ___ DATE ___
SCALE AS NOTED			CRANE, INDIANA	FIGURE NO. 1-2 REV 0



Source: Draft Report, RCRA Facility Investigation
Phase II Groundwater Release Assessment, SWMU 06/09
Demolition Area and Phase III Release
Characterization SWMU 07/09 Old Rifle Range
November 1995 - Figure 13
by William L. Murphy and Roy Wade

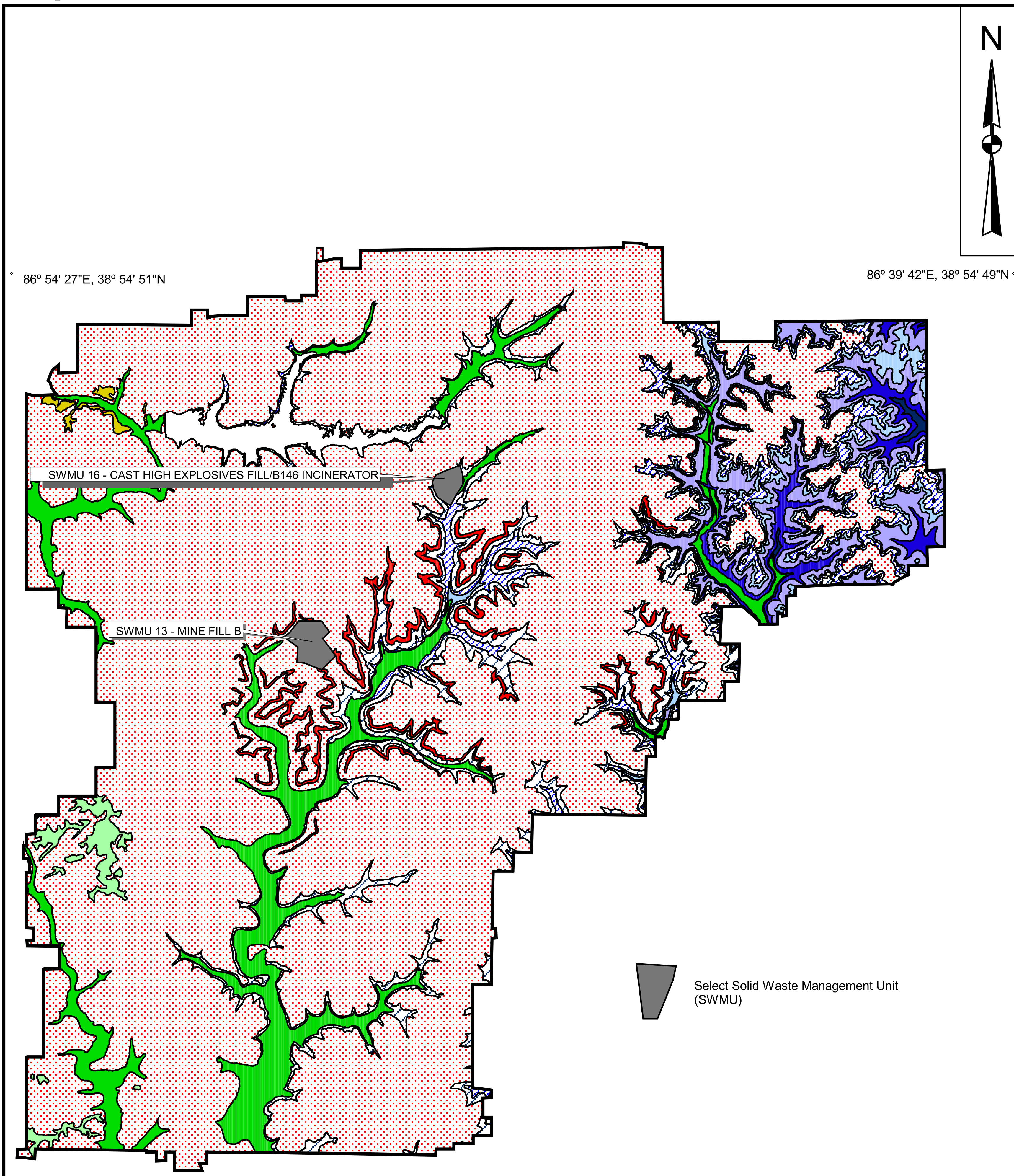
DRAWN BY K. PEILA	DATE 5/31/05
CHECKED BY J. LUCAS	DATE 7/06/10
COST/SCHEDULE-AREA	
SCALE AS NOTED	

NAVFAC

GENERALIZED STRATIGRAPHIC COLUMN
SWMU 16 - CAST HIGH EXPLOSIVES FILL/
B146 INCINERATOR
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER 00041	OWNER NO.
APPROVED BY —	DATE —
APPROVED BY —	DATE —
DRAWING NO. FIGURE 1-3	REV 0

P:\GIS\CRANE_NSWC\MAPDOCS\APR\CRANE_REPORTFIGURES.APR STRATAGRAPHIC COLUMN SWMU16 SDIV 7/6/10 SS



Inferred Depositional Environment		Explanation of Geology
Alluvium	Qal	***Alluvium***
Loess/Glacial Outwash	Ql	***Loess***
	Qo	***Glacial Outwash***
Residual Soil derived from Pennsylvanian bedrock/colluvium	P	***Raccoon Creek Group and undifferentiated***
	Ps	***Sandstone-dominated horizon of Lower Pennsylvanian***
Residual soil derived from Mississippian bedrock/colluvium	M6	***Glenn Dean Ls, Hardinsburg Fm, Haney Ls, Indian Springs Shale Mbr, and undifferentiated***
	M5	***Sandstone member of the Big Clifty Fm***
	M4	***Beech Creek Ls***
	M3	***Elwren Fm, Reelsville Ls, upper Sample Fm, and undifferentiated***
	M2	***Lower part of Sample Fm, Beaver Bend Ls, Bethel Fm, and undifferentiated***
	M1	***Paoli Ls, Ste Genevieve Ls, and undifferentiated***

Source: Background Soils Report. TtNUS 2001. (Modified from Blunck, 1995).

1.5 0 1.5 Miles

DRAWN BY: A. JANOCHA	DATE: 07/09/03
CHECKED BY: J. LUCAS	DATE: 07/06/10
COST/SCHEDULE-AREA	
SCALE: AS NOTED	

NAVFAC

SURFICIAL GEOLOGY MAP
SWMU 13 - MINE FILL B
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER: 00041	
APPROVED BY: —	DATE: —
APPROVED BY: —	DATE: —
DRAWING NO.: FIGURE 1-4	REV: 0

ACAD: 7448CP13.dwg 07/01/10 CK PIT

LEGEND:

PATHWAY DISCRIPTIONS:

A – CONTAMINANT SOURCE AREAS (OVERBURDEN SOIL AND SUMPS)

B – SHALLOW GROUNDWATER SYSTEM

B1 – GROUNDWATER TAKEN UP BY VEGETATION AND TRANSPIRED

B2 – SEEP INTO GUILLIES AT THE SURFACE AND JOIN SURFACE WATERS

B3 – MIGRATION ALONG BEDROCK/SOIL INTERFACE (1–3" bgs) AND INTO SURFACE FRACTURES

C – DEEP GROUNDWATER

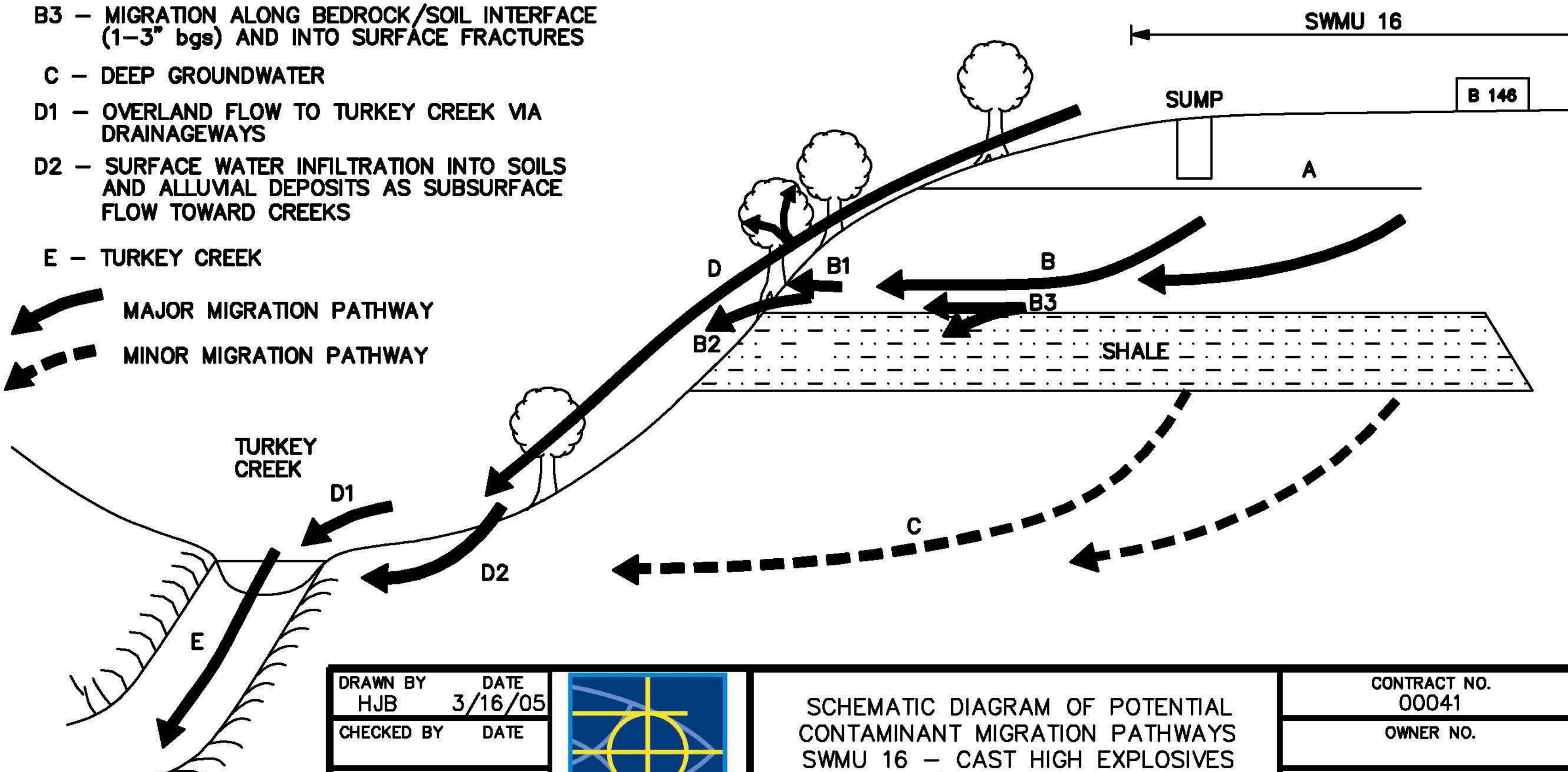
D1 – OVERLAND FLOW TO TURKEY CREEK VIA DRAINAGEWAYS

D2 – SURFACE WATER INFILTRATION INTO SOILS AND ALLUVIAL DEPOSITS AS SUBSURFACE FLOW TOWARD CREEKS

E – TURKEY CREEK

MAJOR MIGRATION PATHWAY

MINOR MIGRATION PATHWAY



DRAWN BY HJB	DATE 3/16/05		SCHEMATIC DIAGRAM OF POTENTIAL CONTAMINANT MIGRATION PATHWAYS SWMU 16 – CAST HIGH EXPLOSIVES FILL/B 146 INCINERATOR NSA CRANE CRANE, INDIANA	CONTRACT NO. 00041
CHECKED BY	DATE			OWNER NO.
REVISED BY	DATE			APPROVED BY / DATE
SCALE NOT TO SCALE		NAVFAC		DRAWING NO. FIGURE 1–8 / REV. 0

FORM CADD NO. SDIV-AH.DWG – REV 1 – 9/10/98

TABLE 2-1

MONITORING WELL CONSTRUCTION INFORMATION AND WATER LEVEL MEASUREMENTS
SWMU 16 - CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR
ROUNDS 1 THROUGH 9
NSA CRANE
CRANE, INDIANA

Well Number	Northing (NAD83)	Easting (NAD83)	Top of Riser Elevation	Total Depth[1]	Water-Bearing Zone	May 5, 2003		May 30, 2003		January 24, 2004		February 4, 2005		May 6, 2005		August 10, 2005		January 5, 2006		May 3, 2006		April 10, 2007	
						Depth to Water	Water Elevation	Depth to Water	Water Elevation	Depth to Water	Water Elevation	Depth to Water	Water Elevation	Depth to Water	Water Elevation	Depth to Water	Water Elevation	Depth to Water	Water Elevation	Depth to Water	Water Elevation	Depth to Water	Water Elevation
	(feet)	(feet)	(feet amsl)	(feet bgs)		(feet btor)	(feet amsl)	(feet btor)	(feet amsl)	(feet btor)	(feet amsl)	(feet btor)	(feet amsl)	(feet btor)	(feet amsl)	(feet btor)	(feet amsl)	(feet btor)	(feet amsl)	(feet btor)	(feet amsl)	(feet btor)	(feet amsl)
16MWT01	1321193.49	3032881.29	764.50	24.00	Puz	25.19	739.31	22.70	741.80	19.12	745.38	15.88	748.62	15.55	748.95	14.49	750.01	15.83	748.67	15.59	748.91	15.98	748.52
16MWT02	1321146.42	3032559.16	760.36	18.00	Puz	6.55	753.81	12.18	748.18	10.94	749.42	12.61	747.75	11.68	748.68	13.1	747.26	8.15	752.21	6.83	753.53	9.92	750.44
16MWT03	1320946.97	3032644.29	764.41	35.00	Pmz	27.20	737.21	28.07	736.34	28.34	736.07	28.88	735.53	27.85	736.56	30.08	734.33	29.03	735.38	27.66	736.75	27.45	736.96
16MWT04	1321003.28	3032946.47	766.14	25.00	Puz	8.05	758.09	13.14	753.00	13.11	753.03	14.29	751.85	13.13	753.01	14.49	751.65	10.58	755.56	10.67	755.47	11.45	754.69
16MWT05	1320741.79	3032812.77	766.88	40.00	Pmz	29.77	737.11	30.39	736.49	31.44	735.44	32.11	734.77	31.10	735.78	33.06	733.82	32.63	734.25	30.98	735.90	30.56	736.32
16MWT06	1321199.52	3032883.37	764.44	25.00	Puz	22.33	742.11	15.92	748.52	17.41	747.03	17.79	746.65	16.69	747.75	17.93	746.51	19.40	745.04	17.58	746.86	17.75	746.69
16MWT07	1321176.93	3033001.57	762.87	25.50	Puz	NA	NA	NA	NA	Dry	NA	Dry	NA	Dry	NA	Dry	NA	Dry	NA	Dry	NA	27.11	735.76
16MWT08	1321179.45	3033009.24	761.56	99.00	Plz	NA	NA	NA	NA	97.03	664.53	96.60	664.96	96.16	665.40	95.81	665.75	95.33	666.23	95.05	666.51	94.25	667.31
16MWT09	1321068.49	3033041.44	764.28	25.00	Puz	NA	NA	NA	NA	13.88	750.40	15.25	749.03	13.82	750.46	15.49	748.79	13.52	750.76	13.21	751.07	12.65	751.63
16MWT10	1320936.05	3033074.74	764.43	25.00	Puz	NA	NA	NA	NA	22.05	742.38	22.30	742.13	21.07	743.36	23.4	741.03	21.49	742.94	21.12	743.31	20.25	744.18
16MWT11	1320934.64	3033062.79	765.24	98.00	Plz	NA	NA	NA	NA	96.30	668.94	96.41	668.83	96.10	669.14	95.92	669.32	Water level below pump	NA	95.95	669.29	95.93	669.31
16MWT12	1320729.14	3033074.92	755.45	26.50	Pmz	NA	NA	NA	NA	20.13	735.32	20.94	734.51	19.85	735.60	21.86	733.59	13.52	741.93	19.82	735.63	19.40	736.05
16MWT13	1321125.78	3032562.41	759.57	19.00	Puz	NA	NA	NA	NA	10.25	749.32	11.36	748.21	10.42	749.15	12.08	747.49	21.49	738.08	8.26	751.31	10.01	749.56
16MWT14	abd.	abd.	abd.	25.00	Puz	NA	NA	NA	NA	Dry, abd.	NA	abd.	NA	abd.	NA	abd.	NA	abd.	NA	abd.	NA	abd.	NA
16MWT15	1321120.81	3032563.53	759.69	92.00	Plz	NA	NA	NA	NA	53.23	706.46	54.99	704.70	56.57	703.12	58.95	700.74	59.43	700.26	59.34	700.35	59.68	700.01
16MWT16	1321059.41	3032814.52	764.74	40.00	Pmz	NA	NA	NA	NA	32.93	731.81	34.40	730.34	33.47	731.27	33.33	731.41	33.32	731.42	33.42	731.32	33.47	731.27
16MWT17	1321235.88	3032675.07	766.53	24.00	Puz	NA	NA	NA	NA	15.35	751.18	15.78	750.75	15.38	751.15	15.79	750.74	15.52	751.01	14.65	751.88	14.35	752.18
16MWT18	1321068.96	3032807.84	764.44	105.00	Plz	NA	NA	NA	NA	96.65	667.79	95.75	668.69	95.68	668.76	95.48	668.96	95.39	669.05	95.24	669.20	95.56	668.88
16MWT19	1320172.28	3033846.62	609.31	16.00	Valley deposits	NA	NA	NA	NA	NA	NA	3.25	606.06	3.36	605.95	8.18	601.13	3.11	606.20	3.11	606.20	3.28	606.03
16MWT20	1320532.68	3034030.68	609.93	16.00	Valley deposits	NA	NA	NA	NA	NA	NA	3.66	606.27	3.81	606.12	7.76	602.17	3.58	606.35	3.41	606.52	3.45	606.48
16MWT21	1320581.35	3032960.08	763.05	96.00	Plz	NA	NA	NA	NA	NA	NA	65.46	697.59	64.90	698.15	65.92	697.13	66.07	696.98	64.93	698.12	64.81	698.24
WES-14-01-83 (16MW01)	1320638.35	3032713.38	766.67	50.70	Pmz	31.00	735.67	31.00	735.67	31.94	734.73	32.33	734.34	31.62	735.05	33.07	733.60	3.52	763.15	31.65	735.02	31.44	735.23
WES-14-02-83 (16MW02)	1321319.90	3032647.27	766.54	25.80	Puz	14.23	752.31	14.56	751.98	15.36	751.18	15.94	750.60	15.40	751.14	15.76	750.78	15.50	751.04	14.72	751.82	14.48	752.06
WES-14-03-83 (16MW03)	1320816.00	3033018.50	763.93	35.40	Puz	18.80	745.13	19.83	744.10	20.00	743.93	20.45	743.48	19.44	744.49	20.69	743.24	19.22	744.71	19.14	744.79	18.78	745.15
WES-14-04-83 (16MW04)	1320572.35	3032960.96	762.99	46.00	Pmz	26.80	736.19	27.27	735.72	28.39	734.60	28.70	734.29	27.67	735.32	29.61	733.38	29.27	733.72	25.64	737.35	27.22	735.77
WES-14-05-83 (16MW05)	1320584.05	3032850.32	769.40	50.70	Pmz	32.59	736.81	33.05	736.35	34.18	735.22	34.88	734.52	33.80	735.60	35.72	733.68	35.41	733.99	33.78	735.62	33.35	736.05

TABLE 2-1

MONITORING WELL CONSTRUCTION INFORMATION AND WATER LEVEL MEASUREMENTS
SWMU 16 - CAST HIGH EXPLOSIVES FILL/BUILDING 146 INCINERATOR
ROUNDS 1 THROUGH 9
NSA CRANE
CRANE, INDIANA

Well Number	Northing (NAD83)	Easting (NAD83)	Top of Riser Elevation	Total Depth[1]	Water-Bearing Zone	May 5, 2003		May 30, 2003		January 24, 2004		February 4, 2005		May 6, 2005		August 10, 2005		January 5, 2006		May 3, 2006		April 10, 2007	
						Depth to Water	Water Elevation	Depth to Water	Water Elevation	Depth to Water	Water Elevation	Depth to Water	Water Elevation	Depth to Water	Water Elevation	Depth to Water	Water Elevation	Depth to Water	Water Elevation	Depth to Water	Water Elevation	Depth to Water	Water Elevation
	(feet)	(feet)	(feet amsl)	(feet bgs)		(feet btor)	(feet amsl)	(feet btor)	(feet amsl)	(feet btor)	(feet amsl)	(feet btor)	(feet amsl)	(feet btor)	(feet amsl)	(feet btor)	(feet amsl)	(feet btor)	(feet amsl)	(feet btor)	(feet amsl)	(feet btor)	(feet amsl)
STAFF GAUGES																							
16SG01	1321342.91	3032498.83	NA	NA	Puz	NA	NA	NA	NA	NM	NM	Dry	NA	Dry	NA	Dry	NA	Dry	NA	NM	NM	Dry	NA
16SG02	1321121.91	3032465.01	NA	NA	Puz	NA	NA	NA	NA	NM	NM	5.29	729.03	Dry	NA	Dry	NA	4.90	729.42	NM	NM	Dry	NA
16SG03	1320712.52	3032705.12	NA	NA	Puz	NA	NA	NA	NA	NM	NM	5.03	756.76	Dry	NA	Dry	NA	4.96	756.83	NM	NM	Dry	NA
16SG04	1320748.57	3033005.16	NA	NA	Puz	NA	NA	NA	NA	NM	NM	2.15	760.29	Dry	NA	Dry	NA	2.11	760.33	NM	NM	Dry	NA
16SG05	1320889.16	3032979.28	NA	NA	Puz	NA	NA	NA	NA	NM	NM	Dry	NA	Dry	NA	Dry	NA	1.45	761.76	NM	NM	Dry	NA
16SG06	1320930.80	3034364.52	NA	NA	Plz	NA	NA	NA	NA	NM	NM	3.51	600.02	3.67	599.86	Dry	NA	3.21	600.32	NM	NM	3.18	600.35
16SG07	1320765.76	3034582.61	NA	NA	Plz	NA	NA	NA	NA	NM	NM	5.99	595.54	Staff washed away	NA	Staff washed away	NA	6.39	595.14	NM	NM	5.89	595.64
16SG08	1318992.38	3033277.47	NA	NA	Plz	NA	NA	NA	NA	NM	NM	4.16	585.84	4.22	585.78	Dry	NA	4.11	585.89	NM	NM	4.10	585.90
16SG09	1318679.54	3033368.61	NA	NA	Plz	NA	NA	NA	NA	NM	NM	6.34	576.92	Dry	NA	Dry	NA	5.93	577.33	NM	NM	4.20	579.06

Notes:

1 = Total depth of boring; total depth of well may be less.
amsl = Above mean sea level (NAVD88).
abd. = well was grouted shut and abandoned
bgs = Below ground surface.
btor = Below top of riser/reference point.
NA = not applicable
NM = not measured
NAD83 = North American Datum of 1983
Puz = Pennsylvanian Upper water-bearing zone
Pmz = Pennsylvanian Middle water-bearing zone
Plz = Pennsylvanian Lower water-bearing zone

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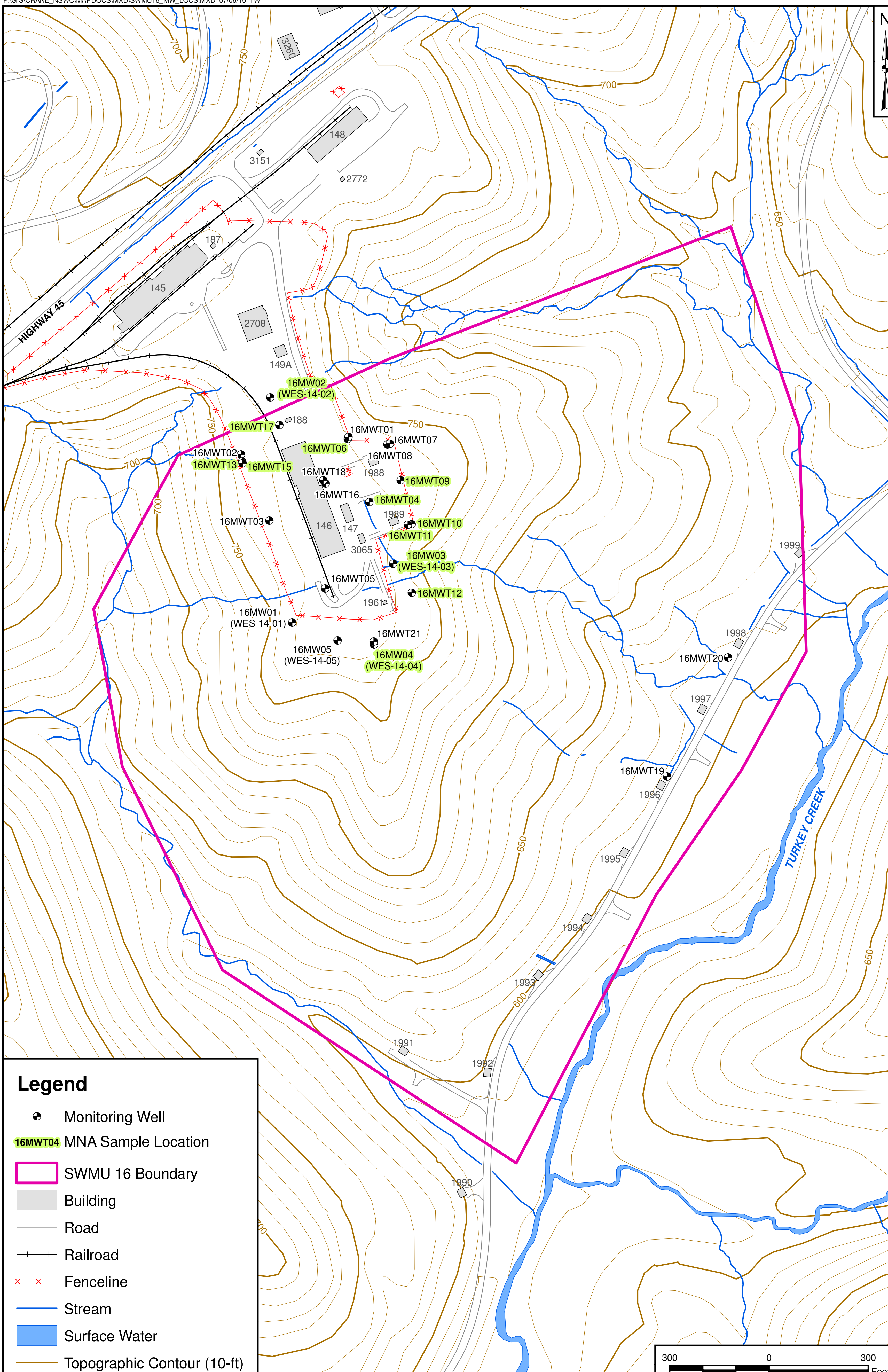


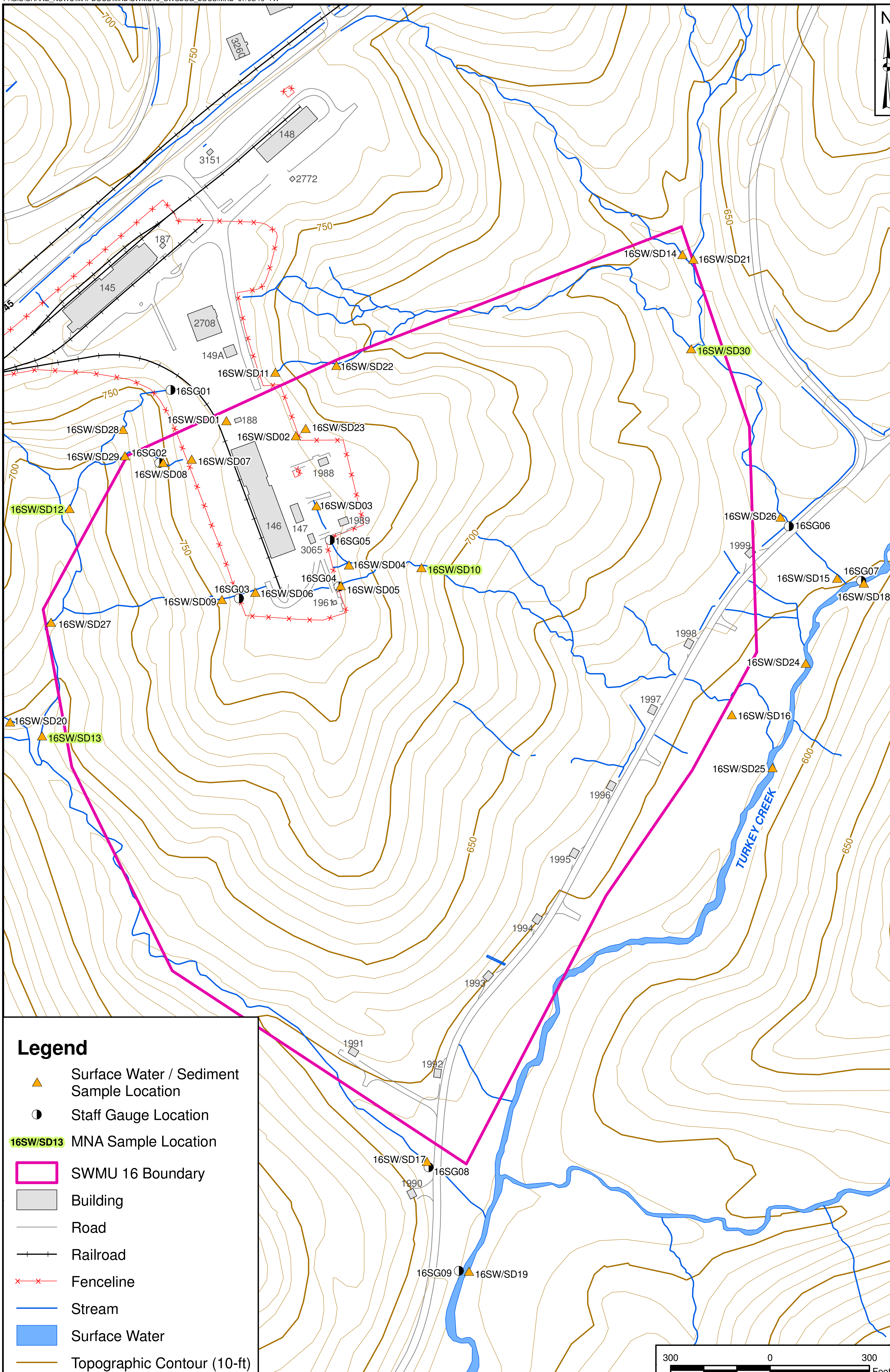
DRAWN BY	DATE
T. WHEATON	07/06/10
CHECKED BY	DATE
J. LUCAS	07/06/10
REVISED BY	DATE
____	____
SCALE	
AS NOTED	

NAVFAC

MONITORING WELL LOCATIONS
SWMU 16 - CAST EXPLOSIVES FILL/
BUILDING 146 INCINERATOR
NSA CRANE
CRANE, INDIANA

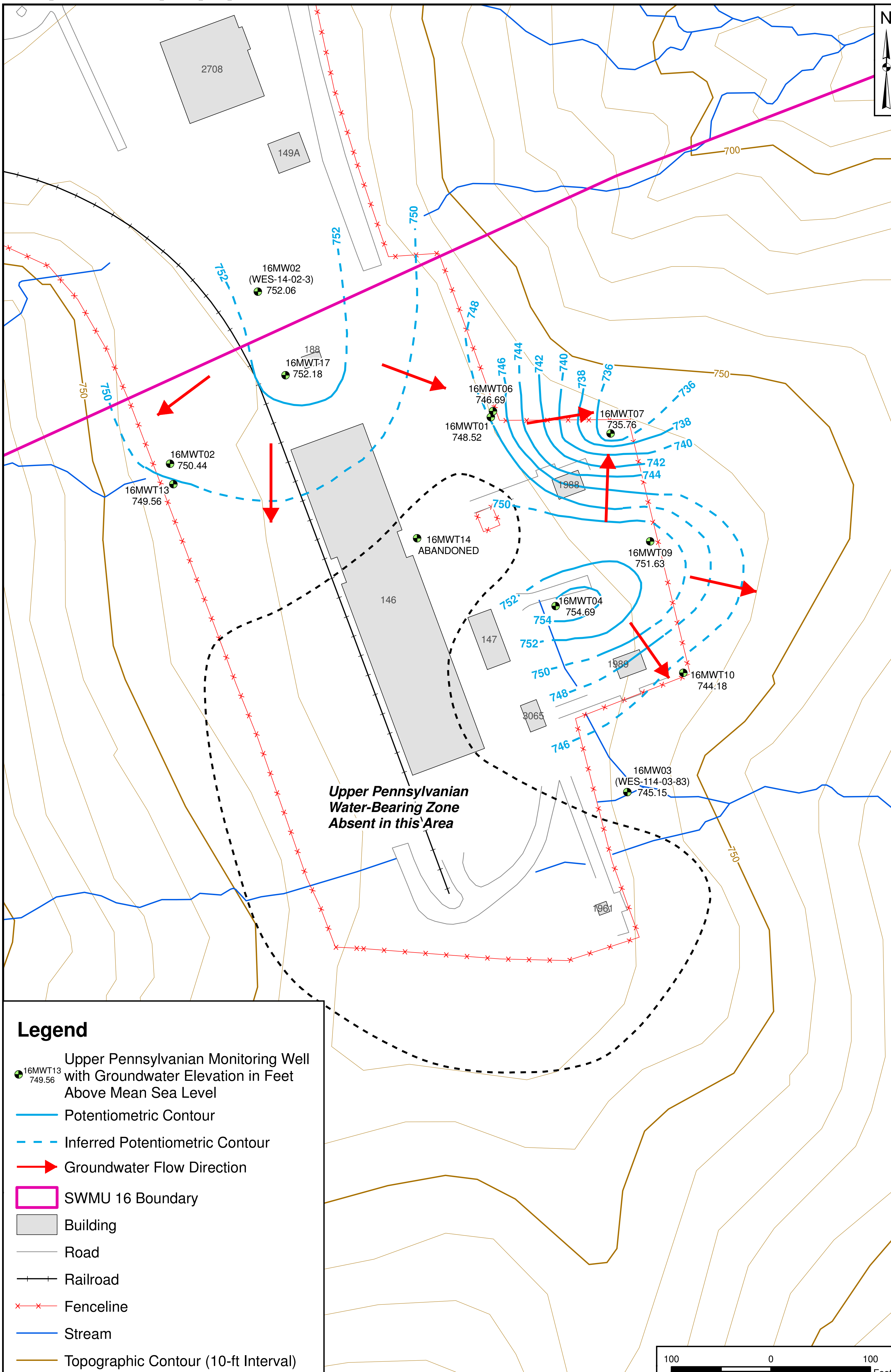
CONTRACT NUMBER 00041	
APPROVED BY ____	DATE ____
APPROVED BY ____	DATE ____
FIGURE NO. FIGURE 2-1	REV 0

P:\GIS\CRANE_NSWC\MAPDOCS\MXD\SWMU16_SWSDSG_LOCS.MXD 07/06/10 TW



DRAWN BY	DATE		SURVEYED SURFACE WATER, SEDIMENT, AND STAFF GAUGE LOCATIONS SWMU 16 - CAST EXPLOSIVES FILL/ BUILDING 146 INCINERATOR NSA CRANE CRANE, INDIANA	CONTRACT NUMBER 00041	
T. WHEATON	07/06/10	NAVFAC		APPROVED BY	DATE
CHECKED BY	DATE			____	____
J. LUCAS	07/06/10			APPROVED BY	DATE
REVISED BY	DATE			____	____
____	____			FIGURE NO.	REV
SCALE AS NOTED				FIGURE 2-2	0

P:\GIS\CRANE_NSWC\MAPDOCS\MXD\SWMU16_POTENTIO_UPWBZ_041007.MXD 07/06/10 TW



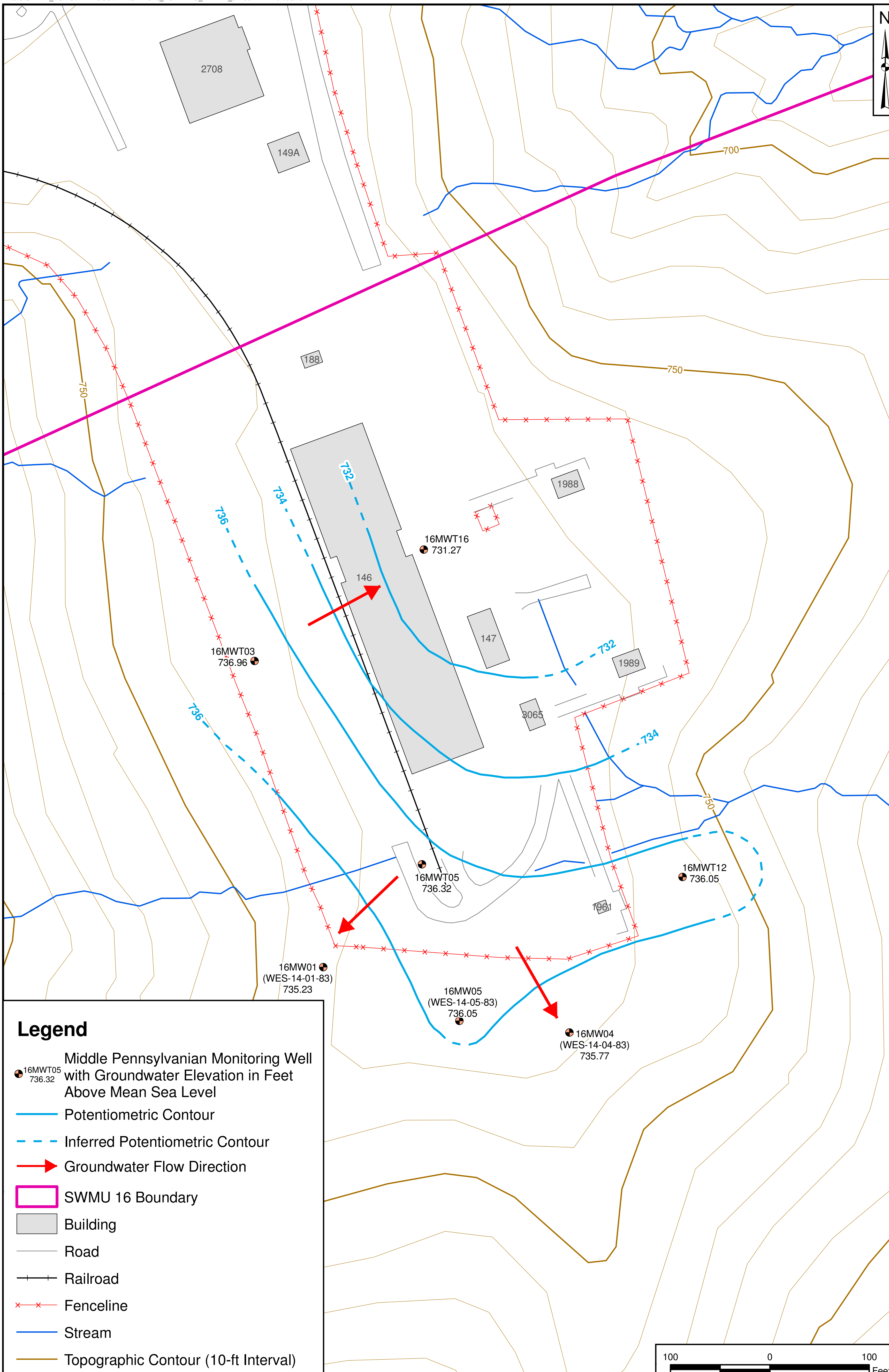
DRAWN BY T. WHEATON	DATE 07/06/10	
CHECKED BY J. LUCAS	DATE 07/06/10	
REVISED BY ____	DATE ____	
SCALE AS NOTED		

NAVFAC

POTENTIOMETRIC SURFACE MAP FOR THE
PENNSYLVANIAN UPPER WATER-BEARING ZONE - APRIL 10, 2007
ROUND 9
SWMU 16 - CAST EXPLOSIVES FILL/BUILDING 146 INCINERATOR
NSA CRANE
CRANE, INDIANA

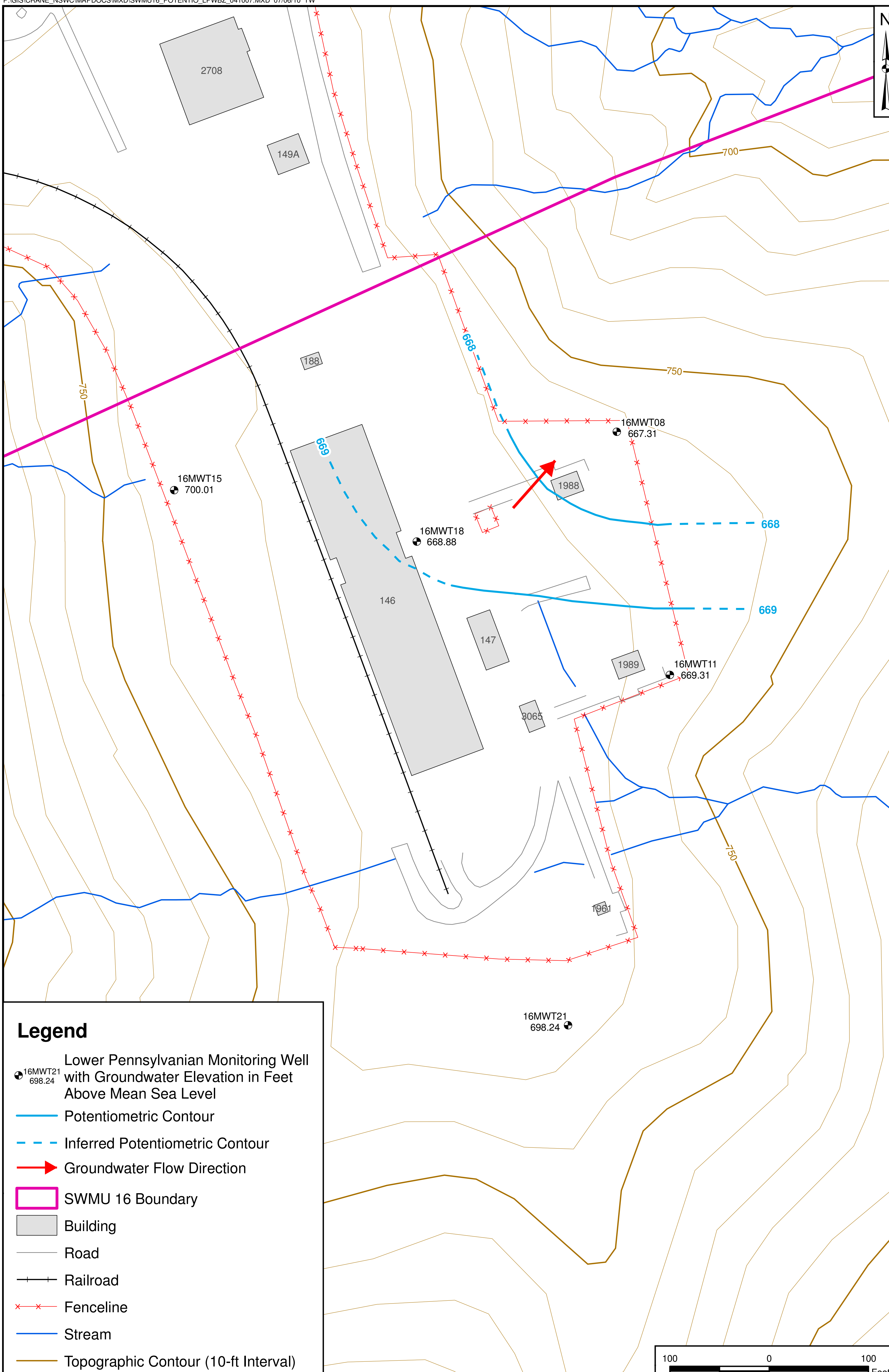
CONTRACT NUMBER 00041	
APPROVED BY ____	DATE ____
APPROVED BY ____	DATE ____
FIGURE NO. FIGURE 3-1	REV 0

P:\GIS\CRANE_NSWC\MAPDOCS\MXD\SWMU16_POTENTIO_MPWBZ_041007.MXD 07/06/10 TW



DRAWN BY T. WHEATON — DATE 07/06/10 CHECKED BY J. LUCAS — DATE 07/06/10 REVISED BY ___ — DATE ___ SCALE AS NOTED	NAVFAC	POTENTIOMETRIC SURFACE MAP FOR THE PENNSYLVANIAN MIDDLE WATER-BEARING ZONE - APRIL 10, 2007 ROUND 9 SWMU 16 - CAST EXPLOSIVES FILL/BUILDING 146 INCINERATOR NSA CRANE CRANE, INDIANA	CONTRACT NUMBER 00041 APPROVED BY ___ — DATE ___ APPROVED BY ___ — DATE ___ FIGURE NO. FIGURE 3-2 — REV 0

P:\GIS\CRANE_NSWC\MAPDOCS\MXD\SWMU16_POTENTIO_LPWBZ_041007.MXD 07/06/10 TW



DRAWN BY T. WHEATON	DATE 07/06/10	NAVFAC	POTENTIOMETRIC SURFACE MAP FOR THE PENNSYLVANIAN LOWER WATER-BEARING ZONE - APRIL 10, 2007 ROUND 9 SWMU 16 - CAST EXPLOSIVES FILL/BUILDING 146 INCINERATOR NSA CRANE CRANE, INDIANA	CONTRACT NUMBER 00041
CHECKED BY J. LUCAS	DATE 07/06/10			APPROVED BY ____ DATE ____
REVISED BY ____	DATE ____			APPROVED BY ____ DATE ____
SCALE AS NOTED				FIGURE NO. FIGURE 3-3 — REV 0

APPENDIX A.2

DATABASE PRINTOUTS FOR VOC AND EXPLOSIVES DATA

TABLE A.2-1
AIR SAMPLE ANALYTICAL RESULTS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION	146ASIN01	146ASIN02	146ASIN03	146ASIN04	146ASIN05	146ASIN06
SAMPLE ID	146ASIN01	146ASIN02	146ASIN03	146ASIN04	146ASIN05	146ASIN06
SAMPLE DATE	20080627	20080627	20080627	20080627	20080627	20080627
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
LOCATION DESCRIPTION [1]	Bay 3 Indoor Air/Center of Room 1	Bay 2 Indoor Air/Center of Room 2	Bay 1 Indoor Air/Center of Room 3	Bay 5 Indoor Air/Center of Room 4	Bay 4 Indoor Air/Center of Room 5	Bay 4 Indoor Air/Near Opening in Floor
MATRIX	AI	AI	AI	AI	AI	AI
VOLATILES (PPBV)						
1,1-DICHLOROETHANE	0.86 U	0.88 U	0.88 U	0.92 U	0.92 U	0.8 U
1,1-DICHLOROETHENE	0.86 U	0.88 U	0.88 U	0.92 U	0.92 U	0.8 U
CHLOROETHANE	0.86 U	0.88 U	0.88 U	0.92 U	0.92 U	0.8 U
CIS-1,2-DICHLOROETHENE	0.86 U	0.88 U	0.88 U	0.92 U	0.92 U	0.8 U
TRICHLOROETHENE	0.94	0.88 U	0.88 U	2.1	1.9	1.4
VINYL CHLORIDE	0.86 U	0.88 U	0.88 U	0.92 U	0.92 U	0.8 U
VOLATILES (UG/M3)						
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--
TRICHLOROETHENE	5.1 *	--	--	11 *	10 *	7.7 *
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--

* Number converted from ppvb to ug/m3 for detections (Tetra Tech, November 2014).

TABLE A.2-1
AIR SAMPLE ANALYTICAL RESULTS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION	146ASIN06	146ASIN07	146ASIN08	146-AS-IN-09	146-AS-IN-09	146-AS-IN-10
SAMPLE ID	146ASIN06-D	146ASIN07	146ASIN08	146ASIN09	146ASIN09-D	146ASIN10
SAMPLE DATE	20080627	20080627	20080627	20140513	20140513	20140513
SAMPLE CODE	DUP	NORMAL	NORMAL	ORIG	DUP	NORMAL
LOCATION DESCRIPTION [(1)]	Bay 4 Indoor Air/Near Opening in Floor	Bay 2 Indoor Air/Interior Office	Bay 3 Indoor Air/By Hose Connection	Bay 1 Indoor Air	Bay 1 Indoor Air	Bay 2 Indoor Air
MATRIX	AI	AI	AI	AI	AI	AI
VOLATILES (PPBV)						
1,1-DICHLOROETHANE	0.9 U	0.9 U	0.9 U	--	--	--
1,1-DICHLOROETHENE	0.9 U	0.9 U	0.9 U	--	--	--
CHLOROETHANE	0.9 U	0.9 U	0.9 U	--	--	--
CIS-1,2-DICHLOROETHENE	0.9 U	0.9 U	0.9 U	--	--	--
TRICHLOROETHENE	1.3	0.9 U	0.83 J	--	--	--
VINYL CHLORIDE	0.9 U	0.9 U	0.9 U	--	--	--
VOLATILES (UG/M3)						
1,1,2,2-TETRACHLOROETHANE	--	--	--	0.21 U	0.21 U	0.21 U
1,1,2-TRICHLOROETHANE	--	--	--	0.55 U	0.55 U	0.55 U
1,1-DICHLOROETHANE	--	--	--	0.4 U	0.4 U	0.4 U
1,1-DICHLOROETHENE	--	--	--	0.4 U	0.4 U	0.4 U
1,2-DICHLOROETHANE	--	--	--	0.53 J	0.4 U	0.4 U
CHLOROETHANE	--	--	--	0.26 U	0.26 U	0.26 U
CHLOROFORM	--	--	--	0.49 U	0.49 U	0.49 U
CIS-1,2-DICHLOROETHENE	--	--	--	0.4 U	0.4 U	0.4 U
DICHLORODIFLUOROMETHANE	--	--	--	1.63 J	1.34 J	1.38 J
METHYLENE CHLORIDE	--	--	--	4.86 J	0.56 U	0.87 U
TETRACHLOROETHENE	--	--	--	1.36 J	0.34 J	0.34
TRICHLOROETHENE	7 *	--	4.5*	0.43	0.16 U	0.16 U
TRICHLOROFLUOROMETHANE	--	--	--	1.8 J	1.74 J	1.74 J
VINYL CHLORIDE	--	--	--	0.08 U	0.08 U	0.08 U

* Number converted from ppvb to ug/m3 for detections (Tetra Tech, November 2014).

TABLE A.2-1
AIR SAMPLE ANALYTICAL RESULTS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION	146-AS-IN-11	146-AS-IN-12	146-AS-IN-13	146ASOT01	146-AS-OU-14	146-AS-SS-15
SAMPLE ID	146ASIN11	146ASIN12	146ASIN13	146ASOT01	146ASOU14	146ASSS15
SAMPLE DATE	20140513	20140513	20140514	20080627	20140513	20140514
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
LOCATION DESCRIPTION (1)	Bay 3 Indoor Air	Bay 4 Indoor Air	Bay 5 Indoor Air	Outdoor Air/South of Building	Outdoor Air/South of Building	Bay 1 Sub-Slab Soil Gas
MATRIX	AI	AI	AI	AO	AO	SG
VOLATILES (PPBV)						
1,1-DICHLOROETHANE	--	--	--	1 U	--	--
1,1-DICHLOROETHENE	--	--	--	1 U	--	--
CHLOROETHANE	--	--	--	1 U	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	1 U	--	--
TRICHLOROETHENE	--	--	--	1 U	--	--
VINYL CHLORIDE	--	--	--	1 U	--	--
VOLATILES (UG/M3)						
1,1,2,2-TETRACHLOROETHANE	0.21 U	0.21 U	0.21 U	--	0.21 U	0.21 U
1,1,2-TRICHLOROETHANE	0.55 U	0.55 U	0.55 U	--	0.55 U	0.55 U
1,1-DICHLOROETHANE	0.4 U	0.4 U	0.4 U	--	0.4 U	0.4 U
1,1-DICHLOROETHENE	0.4 U	0.4 U	0.4 U	--	0.4 U	0.4 U
1,2-DICHLOROETHANE	0.4 U	0.4 U	0.4 U	--	0.4 U	0.4 U
CHLOROETHANE	0.26 U	0.26 U	0.26 U	--	0.26 U	0.26 U
CHLOROFORM	0.49 U	0.49 U	0.49 U	--	0.49 U	0.49 U
CIS-1,2-DICHLOROETHENE	0.4 U	0.4 U	0.4 U	--	0.4 U	0.4 U
DICHLORODIFLUOROMETHANE	1.19 J	1.63 J	2.72	--	1.34 J	2.77
METHYLENE CHLORIDE	0.87 U	2.71 U	2.08 U	--	3.82 U	2.54 U
TETRACHLOROETHENE	0.95	0.61	0.47	--	1.22	0.61
TRICHLOROETHENE	0.59	0.7	1.88	--	0.75	1.77
TRICHLOROFLUOROMETHANE	1.63 J	1.74 J	1.97 J	--	1.69 J	1.97 J
VINYL CHLORIDE	0.08 U	0.08 U	0.08 U	--	0.08 U	0.08 U

TABLE A.2-1
AIR SAMPLE ANALYTICAL RESULTS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION	146-AS-SS-16	146-AS-SS-17	146-AS-SS-18	146-AS-SS-19	146-AS-SS-20	146-AS-SS-20
SAMPLE ID	146ASSS16	146ASSS17	146ASSS18	146ASSS19	146ASSS20	146ASSS20-D
SAMPLE DATE	20140514	20140514	20140514	20140514	20140514	20140514
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
LOCATION DESCRIPTION (1)	Bay 2 Sub-Slab Soil Gas	Bay 3 Sub-Slab Soil Gas	Bay 4 Sub-Slab Soil Gas	Bay 5 Sub-Slab Soil Gas	Bay 5 Sub-Slab Soil Gas	Bay 5 Sub-Slab Soil Gas
MATRIX	SG	SG	SG	SG	SG	SG
VOLATILES (PPBV)						
1,1-DICHLOROETHANE	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--
VOLATILES (UG/M3)						
1,1,2,2-TETRACHLOROETHANE	0.21 U	0.21 U	0.21 UJ	0.21 U	0.21 U	0.21 U
1,1,2-TRICHLOROETHANE	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U
1,1-DICHLOROETHANE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-DICHLOROETHENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-DICHLOROETHANE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
CHLOROETHANE	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
CHLOROFORM	1.03 J	0.49 J	4.35	1.22 J	0.73 J	0.73 J
CIS-1,2-DICHLOROETHENE	0.4 U	0.4 U	0.56 J	0.4 U	2.74	2.58
DICHLORODIFLUOROMETHANE	1.93 J	2.97	2.97	2.97	2.87	2.92
METHYLENE CHLORIDE	2.19 U	0.56 U	1.25 U	3.47 U	1.22 U	0.97 U
TETRACHLOROETHENE	0.27	0.2 U	0.34	4.2	0.47 J	1.29 J
TRICHLOROETHENE	5.05	74.7	1021	151	255	242
TRICHLOROFLUOROMETHANE	1.52 J	1.57 J	1.74 J	1.85 J	1.57 J	1.57 J
VINYL CHLORIDE	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U

1. Bays are numbered as provided in the Final Vapor Intrusion Sampling Report for SWMU 16 (Tetra Tech, November 2014) with the southernmost room numbered Bay 1 and the northernmost room numbered Bay 5.

TABLE A.2-2
SOIL SAMPLE ANALYTICAL RESULTS FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION [1]	16SB001	16SB001	16SB002	16SB002	16SB003	16SB004	16SB005	16SB006
SAMPLE ID	16SS0010002	16SB0010406	16SS0020002	16SB0020406	16SS0030002	16SS0040002	16SS0050002	16SS0060002
SAMPLE DATE	20030327	20030327	20030327	20030327	20030327	20030327	20030327	20030327
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SS	SB	SS	SB	SS	SS	SS	SS
DEPTH STATUS	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TOP DEPTH	0	4	0	4	0	0	0	0
BOTTOM DEPTH	2	6	2	6	2	2	2	2
EXPLOSIVES (MG/KG)								
1,3,5-TRINITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,3-DINITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,4,6-TRINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,4-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2-AMINO-4,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
3-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-AMINO-2,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
HMX	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
NITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
PICRAMIC ACID	0.017 U	0.02 U	0.019 U	0.019 U	0.018 U	0.019 U	0.019 U	0.02 U
PICRIC ACID	0.017 U	0.02 UJ	0.019 U	0.019 U	0.018 U	0.019 U	0.019 U	0.02 U
RDX	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
TETRYL	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
VOLATILE ORGANIC COMPOUNDS (UG/KG)								
1,1,1,2-TETRACHLOROETHANE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
1,1,1-TRICHLOROETHANE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
1,1,2,2-TETRACHLOROETHANE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
1,1,2-TRICHLOROETHANE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
1,1-DICHLOROETHENE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
1,2-DIBROMOETHANE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
1,2-DICHLOROPROPANE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--
1,4-DIOXANE	100 U	--	110 U	--	110 U	120 U	120 U	120 U
2-BUTANONE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
2-HEXANONE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
3-CHLOROPROPENE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
4-METHYL-2-PENTANONE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
ACETONE	7 J	1.2 UJ	1.1 UJ	1.1 UJ	1.1 UJ	3 J	1.2 UJ	1.2 UJ
ACETONITRILE	41 U	--	46 U	--	43 U	47 U	46 U	48 U
ACROLEIN	1 UR	1.2 U	1.1 UR	1.1 UR	1.1 UR	1.2 UR	1.2 UR	1.2 UR
ACRYLONITRILE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
BENZENE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
BROMODICHLOROMETHANE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
BROMOFORM	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
BROMOMETHANE	1 UJ	1.2 UJ	1.1 UJ	1.1 UJ	1.1 UJ	1.2 UJ	1.2 UJ	1.2 UJ
CARBON DISULFIDE	1 UJ	1.2 UJ	1.1 U	1.1 UJ	1.1 U	1.2 U	1.2 UJ	1.2 UJ
CARBON TETRACHLORIDE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
CHLOROBENZENE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
CHLORODIBROMOMETHANE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
CHLOROETHANE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
CHLOROFORM	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
CHLOROMETHANE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
CHLOROPRENE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
CIS-1,2-DICHLOROETHENE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
CIS-1,3-DICHLOROPROPENE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
CYCLOHEXANE	--	--	--	--	--	--	--	--
DIBROMOMETHANE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
DICHLORODIFLUOROMETHANE	1 U	1.2 U	1.1 U	1.1 UJ	1.1 U	1.2 U	1.2 U	1.2 U
ETHYL METHACRYLATE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
ETHYLBENZENE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
ISOBUTANOL	41 U	--	46 U	--	43 U	47 U	46 U	48 U
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--
METHACRYLONITRILE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
METHYL ACETATE	--	--	--	--	--	--	--	--
METHYL IODIDE	1 UJ	1.2 UJ	1.1 UJ	1.1 UJ	1.1 UJ	1.2 UJ	1.2 UJ	1.2 UJ
METHYL METHACRYLATE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	1 UJ	6 BU	2 U	4 U	1 U	3 U	3 U	1.2 UJ
PROPIONITRILE	41 U	--	46 U	--	43 U	47 U	46 U	48 U
STYRENE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1 J	1.2 U	1.2 U
TETRACHLOROETHENE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
TOLUENE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
TOTAL XYLENES	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
TRANS-1,2-DICHLOROETHENE	1 U	1.2 U	1 J	1.1 U	2 J	1 J	1.2 U	1.2 U
TRANS-1,3-DICHLOROPROPENE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
TRANS-1,4-DICHLORO-2-BUTENE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
TRICHLOROETHENE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U
TRICHLOROFLUOROMETHANE	1 U	2 J	2 J	2 J	1.1 U	2 J	2 J	1.2 U
VINYL ACETATE	1 U	1.2 U	1.1 UJ	1.1 U	1.1 UJ	1.2 UJ	1.2 U	1.2 U
VINYL CHLORIDE	1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U

LOCATION [1]	16SB007	16SB008	16SB009	16SB009	16SB010	16SB011	16SB011	16SB012
SAMPLE ID	16SS0070002	16SS0080002	16SS0090002	16SS0090002-D	16SS0100002	16SS0110002	16SB0110204	16SS0120002
SAMPLE DATE	20030327	20030327	20030327	20030327	20030327	20030327	20030327	20030328
SAMPLE CODE	NORMAL	NORMAL	NORMAL	DUP	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SS	SS	SS	SS	SS	SS	SB	SS
DEPTH STATUS	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TOP DEPTH	0	0	0	0	0	0	2	0
BOTTOM DEPTH	2	2	2	2	2	2	4	2
EXPLOSIVES (MG/KG)								
1,3,5-TRINITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,3-DINITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,4,6-TRINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,4-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2-AMINO-4,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
3-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-AMINO-2,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
HMX	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
NITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
PICRAMIC ACID	0.018 U	0.018 U	0.019 U	0.02 U	0.019 U	0.021 U	0.019 U	0.021 U
PICRIC ACID	0.018 U	0.018 U	0.019 U	0.02 U	0.019 U	0.021 U	0.019 UJ	0.021 UJ
RDX	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
TETRYL	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
VOLATILE ORGANIC COMPOUNDS (UG/KG)								
1,1,1,2-TETRACHLOROETHANE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
1,1,1-TRICHLOROETHANE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
1,1,2,2-TETRACHLOROETHANE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
1,1,2-TRICHLOROETHANE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
1,1-DICHLOROETHENE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
1,2-DIBROMOETHANE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
1,2-DICHLOROPROPANE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--
1,4-DIOXANE	110 U	110 U	110 U	120 U	120 U	130 U	--	130 U
2-BUTANONE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
2-HEXANONE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
3-CHLOROPROPENE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
4-METHYL-2-PENTANONE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
ACETONE	1.1 UJ	1.1 UJ	1.1 UJ	1.2 UJ	1.2 UJ	1.3 UJ	--	1.3 UJ
ACETONITRILE	45 U	44 U	46 U	48 U	46 U	50 U	--	51 U
ACROLEIN	1.1 UR	1.1 UR	1.1 UR	1.2 UR	1.2 UR	1.3 UR	--	1.3 U
ACRYLONITRILE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
BENZENE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
BROMODICHLOROMETHANE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
BROMOFORM	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
BROMOMETHANE	1.1 UJ	1.1 UJ	1.1 UJ	1.2 UJ	1.2 UJ	1.3 UJ	--	1.3 UJ
CARBON DISULFIDE	1.1 U	1.1 U	1.1 U	1.2 UJ	1.2 UJ	1.3 UJ	--	1.3 UJ
CARBON TETRACHLORIDE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
CHLOROBENZENE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
CHLORODIBROMOMETHANE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
CHLOROETHANE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
CHLOROFORM	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
CHLOROMETHANE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
CHLOROPRENE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
CIS-1,2-DICHLOROETHENE	2 J	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
CIS-1,3-DICHLOROPROPENE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
CYCLOHEXANE	--	--	--	--	--	--	--	--
DIBROMOMETHANE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
DICHLORODIFLUOROMETHANE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
ETHYL METHACRYLATE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
ETHYLBENZENE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
ISOBUTANOL	45 U	44 U	46 U	48 U	46 U	50 U	--	51 U
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--
METHACRYLONITRILE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
METHYL ACETATE	--	--	--	--	--	--	--	--
METHYL IODIDE	1.1 UJ	1.1 UJ	1.1 UJ	1.2 UJ	1.2 UJ	1.3 UJ	--	1.3 UJ
METHYL METHACRYLATE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	1.1 UJ	2 U	2 U	1 U	1.2 UJ	3 U	--	4 BU
PROPIONITRILE	45 U	44 U	46 U	48 U	46 U	50 U	--	51 U
STYRENE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
TETRACHLOROETHENE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
TOLUENE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
TOTAL XYLENES	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
TRANS-1,2-DICHLOROETHENE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
TRANS-1,3-DICHLOROPROPENE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
TRANS-1,4-DICHLORO-2-BUTENE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
TRICHLOROETHENE	3	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U
TRICHLOROFLUOROMETHANE	1.1 U	2 J	2 J	2 J	1.2 U	1.3 U	--	2 J
VINYL ACETATE	1.1 UJ	1.1 UJ	1.1 UJ	1.2 U	1.2 U	1.3 U	--	1.3 U
VINYL CHLORIDE	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	--	1.3 U

TABLE A.2-2
SOIL SAMPLE ANALYTICAL RESULTS FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION [1]	16SB012	16SB013	16SB013	16SB014	16SB015	16SB016	16SB017	16SB017	16SB017	16SB018	16SB018	16SB019	16SB019	16SB020	16SB021	16SB022
SAMPLE ID	16SB0120204	16SS0130002	16SB0130204	16SS0140002	16SS0150002	16SS0160002	16SS0170002	16SS0170002-D	16SB0170204	16SS0180002	16SB0180203	16SS0190002	16SB0190203	16SS0200002	16SS0210002	16SS0220002
SAMPLE DATE	20030328	20030328	20030328	20030327	20030327	20030327	20030327	20030327	20030327	20030328	20030328	20030328	20030328	20030328	20030328	20030328
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SS	SB	SS	SS	SS	SS	SS	SB	SS	SB	SS	SB	SS	SS	SS
DEPTH STATUS	NORMAL	EXCAVATED	EXCAVATED	EXCAVATED	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	EXCAVATED	NORMAL
TOP DEPTH	2	0	2	0	0	0	0	0	2	0	2	0	2	0	0	0
BOTTOM DEPTH	4	2	4	2	2	2	2	2	4	2	3	2	3	2	2	2
EXPLOSIVES (MG/KG)																
1,3,5-TRINITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,3-DINITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,4,6-TRINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,4-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2-AMINO-4,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
3-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-AMINO-2,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
HMX	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
NITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
PICRAMIC ACID	0.02 U	0.021 U	0.02 U	0.02 U	0.019 UR	0.02 U	0.019 U	0.019 U	0.018 UJ	0.019 U	0.02 U	0.019 U	0.019 U	0.018 U	0.019 UR	0.019 U
PICRIC ACID	0.02 UJ	0.021 U	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.019 U	0.018 UJ	0.019 UJ	0.02 UJ	0.019 U	0.019 UJ	0.018 U	0.019 U	0.019 U
RDX	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
TETRYL	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
VOLATILE ORGANIC COMPOUNDS (UG/KG)																
1,1,1,2-TETRACHLOROETHANE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
1,1,1-TRICHLOROETHANE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
1,1,2,2-TETRACHLOROETHANE	--	1.3 U	--	1.2 U	1.1 UJ	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 UJ	1.2 U
1,1,2-TRICHLOROETHANE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 UJ	1.2 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
1,1-DICHLOROETHENE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
1,2-DIBROMOETHANE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
1,2-DICHLOROPROPANE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	130 U	--	120 U	110 U	120 U	120 U	110 U	--	120 U	--	120 U	--	110 U	110 U	120 U
2-BUTANONE	--	1.3 U	--	1.2 U	1.1 UJ	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 UJ	1.2 U
2-HEXANONE	--	1.3 U	--	1.2 U	1.1 UJ	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 UJ	1.2 U
3-CHLOROPROPENE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
4-METHYL-2-PENTANONE	--	1.3 U	--	1.2 U	1.1 UJ	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 UJ	1.2 U
ACETONE	--	1.3 UJ	--	1.2 UJ	1.1 UJ	1.2 UJ	1.2 UJ	1.1 UJ	--	1.2 UJ	--	8 J	--	1.1 UJ	1.1 UJ	3 J
ACETONITRILE	--	52 U	--	48 U	46 U	48 U	46 U	46 U	--	47 U	--	46 U	--	44 U	46 U	47 U
ACROLEIN	--	1.3 U	--	1.2 UR	1.1 UR	1.2 UR	1.2 UR	1.1 UR	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
ACRYLONITRILE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 UJ	--	1.2 U	--	1.1 U	1.1 U	1.2 U
BENZENE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
BROMODICHLOROMETHANE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
BROMOFORM	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 UJ	1.2 U
BROMOMETHANE	--	1.3 UJ	--	1.2 UJ	1.1 UJ	1.2 UJ	1.2 UJ	1.1 UJ	--	1.2 UJ	--	1.2 UJ	--	1.1 UJ	1.1 UJ	1.2 UJ
CARBON DISULFIDE	--	1.3 UJ	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 UJ	--	1.2 UJ	--	1.2 UJ	--	1.1 UJ	1.1 UJ	1.2 UJ
CARBON TETRACHLORIDE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
CHLOROBENZENE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 UJ	1.2 U
CHLORODIBROMOMETHANE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
CHLOROETHANE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
CHLOROFORM	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
CHLOROMETHANE	--	1.3 U	--	1.2 U	1.1 UJ	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 UJ	1.2 U
CHLOROPRENE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
CIS-1,2-DICHLOROETHENE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
CIS-1,3-DICHLOROPROPENE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIBROMOMETHANE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
DICHLORODIFLUOROMETHANE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 UJ	--	1.1 U	1.1 U	1.2 UJ
ETHYL METHACRYLATE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
ETHYLBENZENE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
ISOBUTANOL	--	52 U	--	48 U	46 U	48 U	46 U	46 U	--	47 UJ	--	46 U	--	44 U	46 U	47 U
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHACRYLONITRILE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL IODIDE	--	1.3 UJ	--	1.2 UJ	1.1 UJ	1.2 UJ	1.2 UJ	1.1 UJ	--	1.2 UJ	--	1.2 UJ	--	1.1 UJ	1.1 UJ	1.2 UJ
METHYL METHACRYLATE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	6 BU	--	4 U	1 U	1.2 UJ	1 U	1.1 UJ	--	2 BU	--	12 BU	--	2 BU	5 BU	3 BU
PROPIONITRILE	--	52 U	--	48 U	46 U	48 U	46 U	46 U	--	47 U	--	46 U	--	44 U	46 U	47 U
STYRENE	--	1.3 U	--	1.2 U	1.1 UJ	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 UJ	1.2 U
TETRACHLOROETHENE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
TOLUENE	--	1.3 U	--	1.2 U	1.1 U	1 J	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
TOTAL XYLENES	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
TRANS-1,2-DICHLOROETHENE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
TRANS-1,3-DICHLOROPROPENE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 UJ	1.2 U
TRANS-1,4-DICHLORO-2-BUTENE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U
TRICHLOROETHENE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	2 J	1.1 U	1.2 U
TRICHLOROFLUOROMETHANE	--	3 J	--	2 J	1.1 U	2 J	2 J	2 J	--	2 J	--	2 J	--	2 J	2 J	2 J
VINYL ACETATE	--	1.3 U	--	1.2 UJ	1.1 UJ	1.2 UJ	1.2 UJ	1.1 U	--	1.2 U	--	1 J	--	1.1 U	1.1 U	1.2 U
VINYL CHLORIDE	--	1.3 U	--	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.2 U

TABLE A.2-2
SOIL SAMPLE ANALYTICAL RESULTS FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNDS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION (1)	16SB022	16SB023	16SB023	16SB023	16SB023	16SB024	16SB024	16SB025	16SB025	16SB026	16SB026	16SB026	16SB026	16SB027	16SB027	16SB028
SAMPLE ID	16SB0220203	16SS0230002	16SS0230002-D	16SB0230203	16SB0230203-D	16SS0240002	16SB0240203	16SS0250002	16SB0250203	16SS0260002	16SS0260002-D	16SB0260204	16SB0260204-D	16SS0270002	16SB0270203	16SS0280002
SAMPLE DATE	20030328	20030328	20030328	20030328	20030328	20030328	20030328	20030328	20030328	20030409	20030409	20030409	20030409	20030328	20030328	20030328
SAMPLE CODE	NORMAL	NORMAL	DUP	NORMAL	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	NORMAL	DUP	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SS	SS	SB	SB	SS	SB	SS	SB	SS	SS	SB	SB	SS	SB	SS
DEPTH STATUS	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TOP DEPTH	2	0	0	2	2	0	2	0	2	0	0	2	2	0	2	0
BOTTOM DEPTH	3	2	2	3	3	2	3	2	3	2	2	4	4	2	3	2
EXPLOSIVES (MG/KG)																
1,3,5-TRINITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,3-DINITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,4,6-TRINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,4-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2-AMINO-4,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
3-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-AMINO-2,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
HMX	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
NITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
PICRAMIC ACID	0.019 U	0.021 U	0.021 U	0.019 U	0.019 U	0.021 U	0.019 U	0.02 U	0.02 U	0.018 U	0.018 U	0.017 U	0.017 U	0.019 U	0.018 U	0.019 U
PICRIC ACID	0.019 UJ	0.021 U	0.021 U	0.019 UJ	0.019 UJ	0.021 UJ	0.019 UJ	0.02 U	0.02 UJ	0.018 U	0.018 U	0.017 U	0.017 U	0.019 U	0.018 UJ	0.019 U
RDX	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
TETRYL	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
VOLATILE ORGANIC COMPOUNDS (UG/KG)																
1,1,1,2-TETRACHLOROETHANE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
1,1,1-TRICHLOROETHANE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
1,1,2,2-TETRACHLOROETHANE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 UJ	1.1 U	--	--	1.1 U	--	1.2 U
1,1,2-TRICHLOROETHANE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 UJ	1.1 U	--	--	1.1 U	--	1.2 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
1,1-DICHLOROETHENE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
1,2-DIBROMOETHANE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
1,2-DICHLOROPROPANE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	130 U	130 U	--	--	130 U	--	120 U	--	110 UJ	110 U	--	--	110 U	--	120 U
2-BUTANONE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 UJ	1.1 U	--	--	1.1 U	--	1.2 U
2-HEXANONE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 UJ	1.1 U	--	--	1.1 U	--	1.2 U
3-CHLOROPROPENE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
4-METHYL-2-PENTANONE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
ACETONE	--	30 J	1.3 UJ	--	--	1.3 UJ	--	34 J	--	8 BU	6 BU	--	--	1.1 UJ	--	1.2 UJ
ACETONITRILE	--	51 U	51 U	--	--	50 U	--	49 U	--	44 U	44 U	--	--	45 U	--	47 U
ACROLEIN	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 UR	1.1 UR	--	--	1.1 U	--	1.2 U
ACRYLONITRILE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
BENZENE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
BROMODICHLOROMETHANE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 UJ	1.1 U	--	--	1.1 U	--	1.2 U
BROMOFORM	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 UJ	1.1 U	--	--	1.1 U	--	1.2 U
BROMOMETHANE	--	1.3 UJ	1.3 UJ	--	--	1.3 UJ	--	1.2 UJ	--	1.1 UJ	1.1 UJ	--	--	1.1 UJ	--	1.2 UJ
CARBON DISULFIDE	--	1.3 UJ	1.3 UJ	--	--	1.3 UJ	--	1.2 UJ	--	1.1 UJ	1.1 UJ	--	--	1.1 UJ	--	1.2 UJ
CARBON TETRACHLORIDE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
CHLOROBENZENE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
CHLORODIBROMOMETHANE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 UJ	1.1 U	--	--	1.1 U	--	1.2 U
CHLOROETHANE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 UJ	1.1 U	--	--	1.1 U	--	1.2 U
CHLOROFORM	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
CHLOROMETHANE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
CHLOROPRENE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
CIS-1,2-DICHLOROETHENE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
CIS-1,3-DICHLOROPROPENE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 UJ	1.1 U	--	--	1.1 U	--	1.2 U
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIBROMOMETHANE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
DICHLORODIFLUOROMETHANE	--	1.3 UJ	1.3 UJ	--	--	1.3 U	--	1.2 UJ	--	1.1 UJ	1.1 UJ	--	--	1.1 U	--	1.2 U
ETHYL METHACRYLATE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
ETHYLBENZENE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
ISOBUTANOL	--	51 U	51 U	--	--	50 U	--	49 U	--	44 U	44 U	--	--	45 U	--	47 U
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHACRYLONITRILE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL IODIDE	--	1.3 UJ	1.3 UJ	--	--	1.3 UJ	--	1.2 UJ	--	1.1 U	1.1 U	--	--	1.1 UJ	--	1.2 UJ
METHYL METHACRYLATE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	6 BU	2 BU	--	--	2 BU	--	8 BU	--	1.1 UJ	1.1 UJ	--	--	3 BU	--	4 BU
PROPIONITRILE	--	51 U	51 U	--	--	50 U	--	49 U	--	44 U	44 U	--	--	45 U	--	47 U
STYRENE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 UJ	1.1 U	--	--	1.1 U	--	1.2 U
TETRACHLOROETHENE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
TOLUENE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
TOTAL XYLENES	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
TRANS-1,2-DICHLOROETHENE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
TRANS-1,3-DICHLOROPROPENE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 UJ	1.1 U	--	--	1.1 U	--	1.2 U
TRANS-1,4-DICHLORO-2-BUTENE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
TRICHLOROETHENE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
TRICHLOROFLUOROMETHANE	--	3 J	2 J	--	--	3 J	--	2 J	--	1.1 U	2 J	--	--	2 J	--	2 J
VINYL ACETATE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U
VINYL CHLORIDE	--	1.3 U	1.3 U	--	--	1.3 U	--	1.2 U	--	1.1 U	1.1 U	--	--	1.1 U	--	1.2 U

TABLE A.2-2
SOIL SAMPLE ANALYTICAL RESULTS FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION [1]	16SB028	16SB029	16SB029	16SB030	16SB030	16SB031	16SB032	16SB032	16SB033	16SB033	16SB034	16SB034	16SB035	16SB036	16SB036	16SB037
SAMPLE ID	16SB0280203	16SS0290002	16SB0290203	16SS0300002	16SB0300203	16SS0310002	16SS0320002	16SB0320204	16SS0330002	16SB0330204	16SS0340002	16SB0340203	16SS0350002	16SS0360002	16SB0360203	16SS0370002
SAMPLE DATE	20030328	20030328	20030328	20030328	20030328	20030328	20030409	20030409	20030409	20030409	20030409	20030409	20030328	20030409	20030409	20030328
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SS	SB	SS	SB	SS	SS	SB	SS	SB	SS	SB	SS	SS	SB	SS
DEPTH STATUS	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TOP DEPTH	2	0	2	0	2	0	0	2	0	2	0	2	0	0	2	0
BOTTOM DEPTH	3	2	3	2	3	2	2	4	2	4	2	3	2	2	3	2
EXPLOSIVES (MG/KG)																
1,3,5-TRINITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,3-DINITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,4,6-TRINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,4-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2-AMINO-4,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
3-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-AMINO-2,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
HMX	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.34 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
NITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
PICRAMIC ACID	0.019 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.019 U	0.018 U	0.018 U	0.019 U	0.019 U	0.019 U	0.018 U
PICRIC ACID	0.019 UJ	0.021 U	0.02 UJ	0.021 U	0.02 UJ	0.02 UJ	0.02 U	0.02 U	0.019 U	0.019 U	0.018 U	0.018 U	0.019 U	0.019 U	0.019 U	0.018 UJ
RDX	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
TETRYL	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
VOLATILE ORGANIC COMPOUNDS (UG/KG)																
1,1,1,2-TETRACHLOROETHANE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
1,1,1-TRICHLOROETHANE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
1,1,2,2-TETRACHLOROETHANE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
1,1,2-TRICHLOROETHANE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
1,1-DICHLOROETHENE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
1,2-DIBROMOETHANE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
1,2-DICHLOROPROPANE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	130 U	--	130 U	--	120 U	120 U	--	110 U	--	110 U	--	110 U	120 U	--	110 U
2-BUTANONE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
2-HEXANONE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
3-CHLOROPROPENE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
4-METHYL-2-PENTANONE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 UJ	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
ACETONE	--	71 J	--	32 J	--	1.2 UJ	1.2 UJ	--	1.1 UJ	--	1.1 UJ	--	1.1 UJ	1.2 UJ	1.2 UJ	1.1 UJ
ACETONITRILE	--	51 U	--	51 U	--	48 U	50 U	--	46 U	--	43 U	--	46 U	46 U	--	44 U
ACROLEIN	--	1.3 U	--	1.3 U	--	1.2 U	1.2 UR	--	1.1 UR	--	1.1 UR	--	1.1 U	1.2 UR	1.2 UR	1.1 U
ACRYLONITRILE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
BENZENE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
BROMODICHLOROMETHANE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
BROMOFORM	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
BROMOMETHANE	--	1.3 UJ	--	1.3 UJ	--	1.2 UJ	1.2 UJ	--	1.1 UJ	--	1.1 UJ	--	1.1 UJ	1.2 UJ	1.2 UJ	1.1 UJ
CARBON DISULFIDE	--	1.3 UJ	--	1.3 UJ	--	1.2 UJ	1.2 UJ	--	1.1 UJ	--	1.1 UJ	--	1.1 UJ	1.2 UJ	1.2 UJ	1.1 UJ
CARBON TETRACHLORIDE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
CHLOROBENZENE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
CHLORODIBROMOMETHANE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
CHLOROETHANE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
CHLOROFORM	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
CHLOROMETHANE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
CHLOROPRENE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
CIS-1,2-DICHLOROETHENE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
CIS-1,3-DICHLOROPROPENE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIBROMOMETHANE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
DICHLORODIFLUOROMETHANE	--	1.3 UJ	--	1.3 U	--	1.2 U	1.2 UJ	--	10 J	--	1.1 UJ	--	1.1 U	1.2 UJ	1.2 UJ	1.1 U
ETHYL METHACRYLATE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
ETHYLBENZENE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
ISOBUTANOL	--	51 U	--	51 U	--	48 U	50 U	--	46 U	--	43 U	--	46 U	46 U	--	44 U
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHACRYLONITRILE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL IODIDE	--	1.3 UJ	--	1.3 UJ	--	1.2 UJ	1.2 U	--	1.1 U	--	1.1 U	--	1.1 UJ	1.2 U	1.2 U	1.1 UJ
METHYL METHACRYLATE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	9 BU	--	3 BU	--	2 BU	1.2 UJ	--	1.1 UJ	--	1.1 UJ	--	13 BU	1.2 UJ	1.2 UJ	1 BU
PROPIONITRILE	--	51 U	--	51 U	--	48 U	50 U	--	46 U	--	43 U	--	46 U	46 U	--	44 U
STYRENE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
TETRACHLOROETHENE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
TOLUENE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
TOTAL XYLENES	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
TRANS-1,2-DICHLOROETHENE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
TRANS-1,3-DICHLOROPROPENE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
TRANS-1,4-DICHLORO-2-BUTENE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
TRICHLOROETHENE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U
TRICHLOROFLUOROMETHANE	--	3 J	--	2 J	--	2 J	2 J	--	3 J	--	2 J	--	3 J	2 J	1.2 U	2 J
VINYL ACETATE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1 J	1.2 U	1.2 U	1.1 U
VINYL CHLORIDE	--	1.3 U	--	1.3 U	--	1.2 U	1.2 U	--	1.1 U	--	1.1 U	--	1.1 U	1.2 U	1.2 U	1.1 U

TABLE A.2-2
SOIL SAMPLE ANALYTICAL RESULTS FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION [1]	16SB038	16SB038	16SB039	16SB039	16SB040	16SB040	16SB040	16SB041	16SB041	16SB047	16SB048	16SB049	16SB050	16SB050	16SB051	16SB051
SAMPLE ID	16SS0380002	16SB0380203	16SS0390002	16SB0390203	16SB0400506	16SB0400608	16SB0400608-D	16SB0410305	16SB0410507	16SB0470405	16SB0480203	16SB0490405	16SB0500103	16SB0500103-D	16SS0510102	16SB0510204
SAMPLE DATE	20030328	20030328	20030328	20030328	20030328	20030328	20030328	20030327	20030327	20031205	20031205	20031205	20031205	20031205	20040813	20040813
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	NORMAL	NORMAL
SUBMATRIX	SS	SB	SS	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SS	SB
DEPTH STATUS	NORMAL	NORMAL	EXCAVATED	EXCAVATED	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	NORMAL	NORMAL
TOP DEPTH	0	2	0	2	5	6	6	3	5	4	2	4	1	1	1	2
BOTTOM DEPTH	2	3	2	3	6	8	8	5	7	5	3	5	3	3	2	4
EXPLOSIVES (MG/KG)																
1,3,5-TRINITROBENZENE	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	--	--	--	--	--	--
1,3-DINITROBENZENE	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	--	--	--	--	--	--
2-AMINO-4,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	--	--	--	--	--	--
2-NITROTOLUENE	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	--	--	--	--	--	--
3-NITROTOLUENE	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	--	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	--	--	--	--	--	--
4-NITROTOLUENE	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	--	--	--	--	--	--
HMX	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	--	--	--	--	--	--
NITROBENZENE	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	--	--	--	--	--	--
PICRAMIC ACID	0.019 U	0.019 U	0.019 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	--	--	--	--	--	--	--
PICRIC ACID	0.019 U	0.019 U	0.019 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	--	--	--	--	--	--	--
RDX	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	--	--	--	--	--	--
TETRYL	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/KG)																
1,1,1,2-TETRACHLOROETHANE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 U	1.09 U	1.17 U
1,1,1-TRICHLOROETHANE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
1,1,2,2-TETRACHLOROETHANE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
1,1,2-TRICHLOROETHANE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 U	1.09 U	1.17 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
1,1-DICHLOROETHENE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 UJ	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 UJ	0.814 UJ	0.978 U	1.04 UJ	1.09 U	1.17 U
1,2-DIBROMOETHANE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 U	1.09 U	1.17 U
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
1,2-DICHLOROPROPANE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	110 U	--	120 U	--	120 U	120 U	120 U	120 U	120 U	106 U	145 U	107 U	114 U	113 U	101 U	133 U
2-BUTANONE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
2-HEXANONE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 U	1.09 U	1.17 U
3-CHLOROPROPENE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
4-METHYL-2-PENTANONE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
ACETONE	1.1 UJ	1.1 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	4 J	14 J	1.18 UJ	1.12 UJ	6 J	0.978 UJ	1.04 UJ	1.09 U	1.17 U
ACETONITRILE	46 U	--	47 U	--	48 U	48 U	49 U	48 U	50 U	42.4 U	58 UR	42.6 U	45.7 U	45.3 U	40.5 U	53.2 U
ACROLEIN	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 UR	1.2 UR	1.18 UR	1.12 UR	0.814 UR	0.978 UR	1.04 UR	1.09 UR	1.17 UR
ACRYLONITRILE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 UR	1.12 U	0.814 UR	101 U	55.6 U	1.09 U	1.17 U
BENZENE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
BROMODICHLOROMETHANE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
BROMOFORM	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 U	1.09 U	1.17 U
BROMOMETHANE	1.1 UJ	1.1 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.18 UJ	1.12 UJ	0.814 U	0.978 UJ	1.04 UJ	1.09 U	1.17 U
CARBON DISULFIDE	1.1 UJ	1.1 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
CARBON TETRACHLORIDE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
CHLOROBENZENE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 U	1.09 U	1.17 U
CHLORODIBROMOMETHANE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 U	1.09 U	1.17 U
CHLOROETHANE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
CHLOROFORM	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
CHLOROMETHANE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
CHLOROPRENE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
CIS-1,2-DICHLOROETHENE	1.1 U	1.1 U	23	200	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	22	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
CIS-1,3-DICHLOROPROPENE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIBROMOMETHANE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 U	1.09 U	1.17 U
DICHLORODIFLUOROMETHANE	1.1 U	1.1 U	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 U	1.2 U	170	130 J	79 J	110	110 J	1.09 U	1.17 J
ETHYL METHACRYLATE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 U	1.09 U	1.17 U
ETHYLBENZENE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 U	1.09 U	1.17 U
ISOBUTANOL	46 U	--	47 U	--	48 U	48 U	49 U	48 U	50 U	42.4 U	58 U	42.6 U	45.7 U	45.3 U	40.5 U	53.2 U
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHACRYLONITRILE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL IODIDE	1.1 UJ	1.1 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.18 UJ	1.12 UJ	0.814 UJ	0.978 UJ	1.04 UJ	1.09 U	1.17 U
METHYL METHACRYLATE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 U	1.09 U	1.17 U
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	2 BU	3 BU	3 BU	2 BU	3 BU	2 BU	6 BU	1.2 UJ	3 U	25 U	28 U	14 U	19 U	29 U	1.09 UJ	1.17 UJ
PROPIONITRILE	46 U	--	47 U	--	48 U	48 U	49 U	48 U	50 U	42.4 U	58 U	42.6 U	45.7 U	45.3 U	40.5 U	53.2 U
STYRENE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 U	1.09 U	1.17 U
TETRACHLOROETHENE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 U	1.09 U	1.17 U
TOLUENE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 U	1.09 U	1.17 U
TOTAL XYLENES	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	2 J	2 J	2 J	1 J	2 J	1.09 U	1.17 U
TRANS-1,2-DICHLOROETHENE	1.1 U	1.1 U	2 J	12	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	1 J	1.04 UJ	1.09 U	1.17 U
TRANS-1,3-DICHLOROPROPENE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 U	1.09 U	1.17 U
TRANS-1,4-DICHLORO-2-BUTENE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
TRICHLOROETHENE	6	4	86	280	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	61	97 J	37	190 J	160	1.09 U	1.17 U
TRICHLOROFLUOROMETHANE	2 J	2 J	2 J	2 J	2 J	2 J	3 J	1.2 U	2 J	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
VINYL ACETATE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 UJ	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U
VINYL CHLORIDE	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.18 U	1.12 U	0.814 U	0.978 U	1.04 UJ	1.09 U	1.17 U

TABLE A.2-2
SOIL SAMPLE ANALYTICAL RESULTS FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION (1)	16SB052	16SB052	16SB053	16SB053	16SB054	16SB054	16SB055	16SB055	16SB055	16SB056	16SB056	16SB056	16SB057	16SB057	16SB058	16SB058
SAMPLE ID	16SS0520102	16SB0520205	16SS0530102	16SB0530205	16SS0540102	16SB0540205	16SS0550102	16SB0550206	16SB0550607	16SS0560102	16SB0560206	16SB0560608	16SS0570102	16SB0570206	16SS0580102	16SB0580206
SAMPLE DATE	20040812	20040812	20040812	20040812	20040813	20040813	20040812	20040812	20040812	20040812	20040812	20040812	20040813	20040813	20040813	20040813
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SS	SB	SS	SB	SS	SB	SS	SB	SB	SS	SB	SB	SS	SB	SS	SB
DEPTH STATUS	NORMAL	NORMAL	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	NORMAL	NORMAL	NORMAL	NORMAL
TOP DEPTH	1	2	1	2	1	2	1	2	6	1	2	6	1	2	1	2
BOTTOM DEPTH	2	5	2	5	2	5	2	6	7	2	6	8	2	6	2	6
EXPLOSIVES (MG/KG)																
1,3,5-TRINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-AMINO-4,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRYL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/KG)																
1,1,1,2-TETRACHLOROETHANE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
1,1,1-TRICHLOROETHANE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
1,1,2,2-TETRACHLOROETHANE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
1,1,2-TRICHLOROETHANE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	8 J	4	0.993 U	1.04 U	0.945 U	1.06 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
1,1-DICHLOROETHENE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 UJ	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
1,2-DIBROMOETHANE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
1,2-DICHLOROPROPANE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	101 U	104 U	87.3 U	96.8 U	107 U	174 U	92.7 U	107 U	118 U	99.3 U	104 U	97.1 U	94.6 U	107 U	109 U	113 U
2-BUTANONE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
2-HEXANONE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	3 J	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
3-CHLOROPROPENE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
4-METHYL-2-PENTANONE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
ACETONE	3 J	1.05 U	1 J	4 J	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	10 U	9 U	0.993 U	8 J	0.945 U	1.06 U
ACETONITRILE	40.5 U	41.6 U	34.9 U	38.7 U	42.8 U	69.5 U	37.1 U	43 U	47.4 U	39.7 U	41.5 U	38.8 U	37.8 U	42.7 U	43.4 U	45.2 U
ACROLEIN	0.933 UR	1.05 UR	0.888 UR	1.01 UR	1.05 UR	1.3 UR	0.93 UR	1.07 UR	0.946 UR	1.02 UR	1.05 UR	1.13 UR	0.993 UR	1.04 UR	0.945 UR	1.06 UR
ACRYLONITRILE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
BENZENE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
BROMODICHLOROMETHANE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
BROMOFORM	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
BROMOMETHANE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	4 J	1.13 UJ	0.993 U	1.04 U	0.945 U	1.06 U
CARBON DISULFIDE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
CARBON TETRACHLORIDE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
CHLOROBENZENE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
CHLORODIBROMOMETHANE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
CHLOROETHANE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
CHLOROFORM	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.1 J	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
CHLOROMETHANE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
CHLOROPRENE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
CIS-1,2-DICHLOROETHENE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
CIS-1,3-DICHLOROPROPENE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIBROMOMETHANE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
DICHLORODIFLUOROMETHANE	2 J	4	7	10	2 J	2 J	7	5	9	7	1.05 UR	1.13 U	0.993 U	5	0.945 U	1.06 U
ETHYL METHACRYLATE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
ETHYLBENZENE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
ISOBUTANOL	40.5 U	41.6 U	34.9 U	38.7 U	42.8 U	69.5 U	37.1 U	43 U	47.4 U	39.7 U	41.5 U	38.8 U	37.8 U	42.7 U	43.4 U	45.2 U
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHACRYLONITRILE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL IODIDE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
METHYL METHACRYLATE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	0.933 UJ	1.05 UJ	0.888 UJ	1.01 UJ	1.05 UJ	1.3 UJ	0.93 UJ	1.07 UJ	0.946 UJ	1.02 UJ	1.05 UR	1.13 U	0.993 UJ	1.04 UJ	0.945 UJ	1.06 UJ
PROPIONITRILE	40.5 U	41.6 U	34.9 U	38.7 U	42.8 U	69.5 U	37.1 U	43 U	47.4 U	39.7 U	41.5 U	38.8 U	37.8 U	42.7 U	43.4 U	45.2 U
STYRENE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
TETRACHLOROETHENE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
TOLUENE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
TOTAL XYLENES	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
TRANS-1,2-DICHLOROETHENE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
TRANS-1,3-DICHLOROPROPENE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
TRANS-1,4-DICHLORO-2-BUTENE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
TRICHLOROETHENE	8	14	61	1300	67	210	64	79	2 J	34	930 J	200	0.993 U	1.04 U	0.945 U	18
TRICHLOROFLUOROMETHANE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
VINYL ACETATE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 UR	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U
VINYL CHLORIDE	0.933 U	1.05 U	0.888 U	1.01 U	1.05 U	1.3 U	0.93 U	1.07 U	0.946 U	1.02 U	1.05 U	1.13 U	0.993 U	1.04 U	0.945 U	1.06 U

LOCATION [1]	16SB058	16SB058	16SB059	16SB059	16SB059	16SB060	16SB060	16SB060	16SB061	16SB061	16SB061	16SB062	16SB062	16SB062	16SB063	16SB063
SAMPLE ID	16SB0580206-D	16SB0580607	16SS0590102	16SB0590206	16SB0590608	16SS0600102	16SB0600206	16SB0600609	16SS0610102	16SB0610206	16SB0610607	16SS0620102	16SB0620206	16SB0620607	16SS0630102	16SB0630206
SAMPLE DATE	20040813	20040813	20040813	20040813	20040813	20040811	20040811	20040811	20040811	20040811	20040811	20040813	20040813	20040813	20040811	20040811
SAMPLE CODE	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SS	SB	SB	SS	SB	SB	SS	SB	SB	SS	SB	SB	SS	SB
DEPTH STATUS	NORMAL	NORMAL	EXCAVATED	EXCAVATED	EXCAVATED	NORMAL	NORMAL	NORMAL	EXCAVATED	EXCAVATED	EXCAVATED	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TOP DEPTH	2	6	1	2	6	1	2	6	1	2	6	1	2	6	1	2
BOTTOM DEPTH	6	7	2	6	8	2	6	9	2	6	7	2	6	7	2	6
EXPLOSIVES (MG/KG)																
1,3,5-TRINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-AMINO-4,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRYL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/KG)																
1,1,1,2-TETRACHLOROETHANE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
1,1,1-TRICHLOROETHANE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
1,1,2,2-TETRACHLOROETHANE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
1,1,2-TRICHLOROETHANE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
1,1-DICHLOROETHENE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 UR	1.04 UJ	1.02 UR	1.19 U	1.09 UR	1.2 U	1 U	1.01 U	0.968 U	1.01 UR	1.19 UR
1,2-DIBROMOETHANE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
1,2-DICHLOROPROPANE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	92.8 U	97.2 U	98.7 U	136 U	98.8 U	105 U	107 UJ	106 U	114 U	124 U	120 U	94.2 U	101 U	103 U	102 U	106 U
2-BUTANONE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 UR	2 J	1.02 UR	1.1 J	1.09 UR	1.2 U	1 U	1.01 U	0.968 U	1.01 UR	1.19 UR
2-HEXANONE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
3-CHLOROPROPENE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
4-METHYL-2-PENTANONE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
ACETONE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	13 U	19 U	24 U	10 U	3 U	5 U	1 U	1.01 U	0.968 U	1.01 UR	1 U
ACETONITRILE	37.1 U	38.9 U	39.5 U	54.5 U	39.5 U	42 U	42.6 UJ	42.4 U	45.5 U	49.8 U	47.9 U	37.7 U	40.5 U	41.2 U	40.7 U	42.4 U
ACROLEIN	0.95 UR	1.03 UR	1.01 UR	1.22 UR	0.988 UR	1.14 UR	1.04 UR	1.02 UR	1.19 UR	1.09 UR	1.2 UR	1 UR	1.01 UR	0.968 UR	1.01 UR	1.19 UR
ACRYLONITRILE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 UR	1.04 UJ	1.02 UR	1.19 U	1.09 UR	1.2 U	1 U	1.01 U	0.968 U	1.01 UR	1.19 UR
BENZENE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
BROMODICHLOROMETHANE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
BROMOFORM	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
BROMOMETHANE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 UJ	1.09 U	1.2 UJ	1 U	1.01 U	0.968 U	1.01 U	1.19 U
CARBON DISULFIDE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
CARBON TETRACHLORIDE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
CHLOROBENZENE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
CHLORODIBROMOMETHANE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
CHLOROETHANE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
CHLOROFORM	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
CHLOROMETHANE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
CHLOROPRENE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
CIS-1,2-DICHLOROETHENE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	17	8 J	4	1.1 J	86	11	1 U	1.01 U	0.968 U	1.01 U	1.19 U
CIS-1,3-DICHLOROPROPENE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIBROMOMETHANE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
DICHLORODIFLUOROMETHANE	0.95 U	1.03 U	1.01 U	1.22 J	0.988 U	1.14 U	22 J	1.02 U	1.19 U	2 J	1.2 U	1 U	1.01 U	0.968 U	1.01 U	4 J
ETHYL METHACRYLATE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
ETHYLBENZENE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
ISOBUTANOL	37.1 U	38.9 U	39.5 U	54.5 U	39.5 U	42 U	42.6 UJ	42.4 U	45.5 U	49.8 U	47.9 U	37.7 U	40.5 U	41.2 U	40.7 U	42.4 U
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHACRYLONITRILE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 UR	1.04 UJ	1.02 UR	1.19 U	1.09 UR	1.2 U	1 U	1.01 U	0.968 U	1.01 UR	1.19 UR
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL IODIDE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
METHYL METHACRYLATE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	0.95 UJ	1.03 UJ	1.01 UJ	1.22 UJ	0.988 UJ	1.14 U	16 U	1.02 U	1.19 U	1.09 U	3 U	1 UJ	1.01 UJ	0.968 UJ	1.01 U	1.19 U
PROPIONITRILE	37.1 U	38.9 U	39.5 U	54.5 U	39.5 U	42 U	42.6 UJ	42.4 U	45.5 U	49.8 U	47.9 U	37.7 U	40.5 U	41.2 U	40.7 U	42.4 U
STYRENE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
TETRACHLOROETHENE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
TOLUENE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
TOTAL XYLENES	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
TRANS-1,2-DICHLOROETHENE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	5	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
TRANS-1,3-DICHLOROPROPENE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
TRANS-1,4-DICHLORO-2-BUTENE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
TRICHLOROETHENE	16	28	13	190	9	9	28 J	1.02 U	3 J	160	14	1 U	5	6	1.01 U	1.19 U
TRICHLOROFLUOROMETHANE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	2 J	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
VINYL ACETATE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U
VINYL CHLORIDE	0.95 U	1.03 U	1.01 U	1.22 U	0.988 U	1.14 U	1.04 UJ	1.02 U	1.19 U	1.09 U	1.2 U	1 U	1.01 U	0.968 U	1.01 U	1.19 U

TABLE A.2-2
SOIL SAMPLE ANALYTICAL RESULTS FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION [1]	16SB063	16SB064	16SB064	16SB064	16SB065	16SB065	16SB065	16SB066	16SB066	16SB066	16SB067	16SB067	16SB067	16SB068	16SB068	16SB068
SAMPLE ID	16SB0630608	16SS0640102	16SB0640206	16SB0640608	16SS0650102	16SB0650206	16SB0650608	16SS0660102	16SB0660206	16SB0660608	16SS0670102	16SB0670206	16SB0670609	16SS0680102	16SB0680206	16SB0680206-D
SAMPLE DATE	20040811	20040811	20040811	20040811	20040811	20040811	20040811	20040812	20040812	20040812	20040812	20040812	20040812	20040812	20040812	20040812
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	SB	SS	SB	SB	SS	SB	SB	SS	SB	SB	SS	SB	SB	SS	SB	SB
DEPTH STATUS	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TOP DEPTH	6	1	2	6	1	2	6	1	2	6	1	2	6	1	2	2
BOTTOM DEPTH	8	2	6	8	2	6	8	2	6	8	2	6	9	2	6	6
EXPLOSIVES (MG/KG)																
1,3,5-TRINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-AMINO-4,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRYL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/KG)																
1,1,1,2-TETRACHLOROETHANE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
1,1,1-TRICHLOROETHANE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
1,1,2,2-TETRACHLOROETHANE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
1,1,2-TRICHLOROETHANE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
1,1-DICHLOROETHENE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	1.3 UR	1.05 UR	1.09 UR	1.24 UR	1.17 UR	1.27 UR	1.45 UR	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
1,2-DIBROMOETHANE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 UJ	1 U
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
1,2-DICHLOROPROPANE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	108 U	105 U	131 U	108 U	114 U	113 U	119 U	108 U	99.8 U	123 U	110 U	98.7 U	105 U	101 U	101 U	100 U
2-BUTANONE	1.3 UR	1.05 UR	1.09 UR	1.24 UR	1.17 UR	1.27 UR	1.45 UR	1.26 U	1.23 U	1 J	4 J	1.09 U	1.21 U	2 J	1.02 U	1 U
2-HEXANONE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
3-CHLOROPROPENE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
4-METHYL-2-PENTANONE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
ACETONE	1.3 UR	1.1 U	2 U	7 U	1.17 UR	72 J	6 U	51 BJ	6 U	21 U	33 BJ	6 BU	8 U	25 BJ	7 BU	2 J
ACETONITRILE	43.1 U	41.9 U	52.3 U	43.2 U	45.8 U	45.1 U	47.6 U	43.1 UJ	39.9 UJ	49.2 UJ	43.9 UJ	39.5 UJ	42.1 UJ	40.4 UJ	40.3 UJ	40 U
ACROLEIN	1.3 UR	1.05 UR	1.09 UR	1.24 UR	1.17 UR	1.27 UR	1.45 UR	1.26 UR	1.23 UR	0.92 UR	1.19 UR	1.09 UR	1.21 UR	0.963 UR	1.02 UR	1 UR
ACRYLONITRILE	1.3 UR	1.05 UR	1.09 UR	1.24 UR	1.17 UR	1.27 UR	1.45 UR	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
BENZENE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
BROMODICHLOROMETHANE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
BROMOFORM	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
BROMOMETHANE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 UJ	1.23 UJ	0.92 UJ	1.19 UJ	1.09 UJ	1.21 UJ	0.963 UJ	1.02 UJ	1 U
CARBON DISULFIDE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	2 J	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
CARBON TETRACHLORIDE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
CHLOROBENZENE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
CHLORODIBROMOMETHANE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
CHLOROETHANE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
CHLOROFORM	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
CHLOROMETHANE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
CHLOROPRENE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
CIS-1,2-DICHLOROETHENE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	24	27	73	23	1 J	3 J	1.09 U	1.21 U	5	7 J	14 J
CIS-1,3-DICHLOROPROPENE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIBROMOMETHANE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
DICHLORODIFLUOROMETHANE	1.3 U	2 J	1.1 J	3 J	2 J	5	1.45 U	1.26 U	5 J	5 J	4	1.09 U	16 J	2 J	1.02 U	1 U
ETHYL METHACRYLATE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
ETHYLBENZENE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
ISOBUTANOL	43.1 U	41.9 U	52.3 U	43.2 U	45.8 U	45.1 U	47.6 U	43.1 U	39.9 U	49.2 U	43.9 U	39.5 U	42.1 U	40.4 U	40.3 U	40 U
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHACRYLONITRILE	1.3 UR	1.05 UR	1.09 UR	1.24 UR	1.17 UR	1.27 UR	1.45 UR	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL IODIDE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
METHYL METHACRYLATE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	5 U	5 U	3 BU	2 BU	5 U	2 BU	1.02 U	1 UJ
PROPIONITRILE	43.1 U	41.9 U	52.3 U	43.2 U	45.8 U	45.1 U	47.6 U	43.1 U	39.9 U	49.2 U	43.9 U	39.5 U	42.1 U	40.4 U	40.3 U	40 U
STYRENE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
TETRACHLOROETHENE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
TOLUENE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
TOTAL XYLENES	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
TRANS-1,2-DICHLOROETHENE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	3 J	4 J	1.26 J	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
TRANS-1,3-DICHLOROPROPENE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
TRANS-1,4-DICHLORO-2-BUTENE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
TRICHLOROETHENE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	3 J	17	34	9	0.92 U	3 J	2 J	2 J	0.963 U	1.02 U	2 J
TRICHLOROFLUOROMETHANE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	2 J	0.963 U	1.02 U	1 U
VINYL ACETATE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	1.27 U	1.45 U	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U
VINYL CHLORIDE	1.3 U	1.05 U	1.09 U	1.24 U	1.17 U	12	6	1.26 U	1.23 U	0.92 U	1.19 U	1.09 U	1.21 U	0.963 U	1.02 U	1 U

LOCATION [1]	16SB068	16SB069	16SB069	16SB069	16SB070	16SB070	16SB070	16SB071	16SB071	16SB072	16SB072	16SB072	16SB073	16SB073	16SB074	16SB074
SAMPLE ID	16SB0680609	16SS0690102	16SB0690206	16SB0690607	16SS0700102	16SB0700206	16SB0700607	16SS0710102	16SB0710206	16SS0720102	16SB0720206	16SB0720607	16SS0730102	16SB0730204	16SS0740102	16SS0740102-D
SAMPLE DATE	20040812	20040812	20040812	20040812	20040812	20040812	20040812	20040812	20040812	20040812	20040812	20040812	20040812	20040812	20040817	20040817
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	SB	SS	SB	SB	SS	SB	SB	SS	SB	SS	SB	SB	SS	SB	SS	SS
DEPTH STATUS	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TOP DEPTH	6	1	2	6	1	2	6	1	2	1	2	6	1	2	1	1
BOTTOM DEPTH	9	2	6	7	2	6	7	2	6	2	6	7	2	4	2	2
EXPLOSIVES (MG/KG)																
1,3,5-TRINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-AMINO-4,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRYL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/KG)																
1,1,1,2-TETRACHLOROETHANE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
1,1,1-TRICHLOROETHANE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
1,1,2,2-TETRACHLOROETHANE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
1,1,2-TRICHLOROETHANE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
1,1-DICHLOROETHENE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
1,2-DIBROMOETHANE	1.12 U	0.995 UJ	1.05 U	1.35 UJ	0.923 U	1.2 U	0.978 UJ	0.943 UJ	1.16 U	0.933 U	0.986 UJ	1.22 UJ	1 UJ	1.03 UJ	0.938 U	1.02 U
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
1,2-DICHLOROPROPANE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	97.8 U	107 U	112 U	116 U	96.5 U	125 U	126 U	99.7 UJ	113 U	91 U	98.6 U	109 U	101 U	105 U	96.1 U	114 U
2-BUTANONE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	3 J	0.986 U	1.22 U	5 J	1.03 U	0.938 U	1.02 U
2-HEXANONE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
3-CHLOROPROPENE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
4-METHYL-2-PENTANONE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 J	1.03 U	0.938 U	1.02 U
ACETONE	5 BU	13 BU	5 U	6 BU	4 U	2 U	5 U	15 J	3 J	28 J	8 BU	7 BU	51 BJ	13 BU	3 BU	2 BU
ACETONITRILE	39.1 UJ	42.7 UJ	44.9 UJ	46.5 UJ	38.6 U	49.8 U	50.3 U	39.9 UJ	45.2 U	36.4 UJ	39.4 U	43.6 U	40.5 U	41.9 U	38.5 U	45.7 U
ACROLEIN	1.12 UR	0.995 UR	1.05 UR	1.35 UR	0.923 UR	1.2 UR	0.978 UR	0.943 UR	1.16 UR	0.933 UR	0.986 UR	1.22 UR	1 UR	1.03 UR	0.938 UR	1.02 UR
ACRYLONITRILE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
BENZENE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
BROMODICHLOROMETHANE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
BROMOFORM	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
BROMOMETHANE	1.12 UJ	0.995 UJ	1.05 UJ	1.35 UJ	0.923 UJ	1.2 UJ	0.978 UJ	0.943 UJ	1.16 U	0.933 UJ	0.986 UJ	1.22 UJ	1 UJ	1.03 UJ	0.938 U	1.02 U
CARBON DISULFIDE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	3	0.986 U	1.22 U	2 J	1.03 U	0.938 U	1.02 U
CARBON TETRACHLORIDE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
CHLOROBENZENE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
CHLORODIBROMOMETHANE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
CHLOROETHANE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
CHLOROFORM	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
CHLOROMETHANE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
CHLOROPRENE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
CIS-1,2-DICHLOROETHENE	5	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	2 J	0.943 UJ	1.16 U	13	32	53	3 J	5	0.938 U	1.02 U
CIS-1,3-DICHLOROPROPENE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIBROMOMETHANE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
DICHLORODIFLUOROMETHANE	1.12 U	0.995 U	1.05 UJ	1.35 U	0.923 U	1.2 U	0.978 U	20 J	10	0.933 UJ	0.986 U	1.22 U	1 U	13	1 J	2 J
ETHYL METHACRYLATE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
ETHYLBENZENE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
ISOBUTANOL	39.1 U	42.7 U	44.9 U	46.5 U	38.6 U	49.8 U	50.3 U	39.9 UJ	45.2 U	36.4 U	39.4 U	43.6 U	40.5 U	41.9 U	38.5 U	45.7 U
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHACRYLONITRILE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL IODIDE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 UJ	1.02 UJ
METHYL METHACRYLATE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	2 BU	0.995 U	2 U	1.35 U	2 U	2 U	0.978 U	3 J	1.16 UJ	2 U	2 U	1.22 U	2 U	5 U	0.938 UJ	1.02 UJ
PROPIONITRILE	39.1 U	42.7 U	44.9 U	46.5 U	38.6 U	49.8 U	50.3 U	39.9 UJ	45.2 U	36.4 U	39.4 U	43.6 U	40.5 U	41.9 U	38.5 U	45.7 U
STYRENE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
TETRACHLOROETHENE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
TOLUENE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 J	1.03 U	0.938 U	1.02 U
TOTAL XYLENES	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	3	1.03 U	0.938 U	1.02 U
TRANS-1,2-DICHLOROETHENE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
TRANS-1,3-DICHLOROPROPENE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
TRANS-1,4-DICHLORO-2-BUTENE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
TRICHLOROETHENE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	10	0.943 UJ	1.16 U	2 J	5	11	1 U	1.03 U	0.938 U	1.02 U
TRICHLOROFLUOROMETHANE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	3 J	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 J	0.938 U	1.02 U
VINYL ACETATE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U
VINYL CHLORIDE	1.12 U	0.995 U	1.05 U	1.35 U	0.923 U	1.2 U	0.978 U	0.943 UJ	1.16 U	0.933 U	0.986 U	1.22 U	1 U	1.03 U	0.938 U	1.02 U

LOCATION [1]	16SB074	16SB075	16SB075	16SB076	16SB076	16SB076	16SB077	16SB077	16SB077	16SB077	16SB078	16SB078	16SB078	16SB090	16SB090	16SB091
SAMPLE ID	16SB0740206	16SS0750102	16SB0750203	16SS0760102	16SB0760206	16SB0760607	16SS0770102	16SB0770206	16SB0770206-D	16SB0770610	16SS0780102	16SB0780206	16SB0780609	16SB0900406	16SB0900608	16SB0910406
SAMPLE DATE	20040817	20040812	20040812	20040812	20040812	20040812	20040812	20040812	20040812	20040812	20040812	20040812	20040812	20040816	20040816	20040816
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SS	SB	SS	SB	SB	SS	SB	SB	SB	SS	SB	SB	SB	SB	SB
DEPTH STATUS	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TOP DEPTH	2	1	2	1	2	6	1	2	2	6	1	2	6	4	6	4
BOTTOM DEPTH	6	2	3	2	6	7	2	6	6	10	2	6	9	6	8	6
EXPLOSIVES (MG/KG)																
1,3,5-TRINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-AMINO-4,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRYL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/KG)																
1,1,1,2-TETRACHLOROETHANE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
1,1,1-TRICHLOROETHANE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
1,1,2,2-TETRACHLOROETHANE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
1,1,2-TRICHLOROETHANE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
1,1-DICHLOROETHENE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	1.04 UJ	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	1.04 UJ	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
1,2-DIBROMOETHANE	1.04 UJ	0.967 UJ	0.975 UJ	0.953 U	0.929 U	1.12 U	0.893 UJ	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
1,2-DICHLOROPROPANE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	101 U	96.7 U	94.2 U	96.4 U	102 U	121 U	95.1 U	110 U	97.1 U	90.8 U	94.5 U	114 U	112 UJ	89.8 U	97.2 U	94.4 U
2-BUTANONE	1.04 U	0.967 U	0.975 U	0.953 U	1 J	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
2-HEXANONE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
3-CHLOROPROPENE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
4-METHYL-2-PENTANONE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
ACETONE	4 BU	5 BU	6 BU	2 J	13 J	1.12 U	3 U	0.988 U	3 J	0.92 U	1.02 U	1.01 U	15 J	0.955 U	1.17 U	0.944 U
ACETONITRILE	40.3 U	38.7 U	37.7 U	38.6 U	40.9 U	48.6 U	38 U	44.1 U	38.8 U	36.3 U	37.8 U	45.7 U	45 UJ	35.9 U	38.9 U	37.7 U
ACROLEIN	1.04 UR	0.967 UR	0.975 UR	0.953 UR	0.929 UR	1.12 UR	0.893 UR	0.988 UR	0.976 UR	0.92 UR	1.02 UR	1.01 UR	1.04 UR	0.955 UR	1.17 UR	0.944 UR
ACRYLONITRILE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
BENZENE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
BROMODICHLOROMETHANE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
BROMOFORM	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
BROMOMETHANE	1.04 U	0.967 UJ	0.975 UJ	0.953 U	0.929 U	1.12 U	0.893 UJ	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
CARBON DISULFIDE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
CARBON TETRACHLORIDE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
CHLOROBENZENE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
CHLORODIBROMOMETHANE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
CHLOROETHANE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
CHLOROFORM	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	5
CHLOROMETHANE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
CHLOROPRENE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
CIS-1,2-DICHLOROETHENE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 J	1 J
CIS-1,3-DICHLOROPROPENE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIBROMOMETHANE	1.04 UJ	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
DICHLORODIFLUOROMETHANE	5	2 J	11	13	12	9	0.893 UJ	11 J	4 J	2 J	1.02 U	6	14 J	4 J	6 J	9 J
ETHYL METHACRYLATE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
ETHYLBENZENE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
ISOBUTANOL	40.3 U	38.7 U	37.7 U	38.6 U	40.9 U	48.6 U	38 U	44.1 U	38.8 U	36.3 U	37.8 U	45.7 U	45 UJ	35.9 U	38.9 U	37.7 U
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHACRYLONITRILE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL IODIDE	1.04 UJ	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 UR	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
METHYL METHACRYLATE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	1.04 UJ	3 U	4 U	0.953 UJ	0.929 UJ	1.12 UJ	0.893 UJ	0.988 UJ	0.976 UJ	0.92 UJ	1.02 UJ	1.01 UJ	1.04 UJ	0.955 UJ	1.17 UJ	0.944 UJ
PROPIONITRILE	40.3 U	38.7 U	37.7 U	38.6 U	40.9 U	48.6 U	38 U	44.1 U	38.8 U	36.3 U	37.8 U	45.7 U	45 UJ	35.9 U	38.9 U	37.7 U
STYRENE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
TETRACHLOROETHENE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
TOLUENE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
TOTAL XYLENES	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
TRANS-1,2-DICHLOROETHENE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
TRANS-1,3-DICHLOROPROPENE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
TRANS-1,4-DICHLORO-2-BUTENE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
TRICHLOROETHENE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	1 J	1.02 U	1.01 U	1.04 UJ	220 J	220 J	390 J
TRICHLOROFLUOROMETHANE	1.04 U	0.967 U	1 J	1 J	1 J	1.12 U	0.893 U	1 J	0.976 U	0.92 U	1.02 U	1.01 U	2 J	0.955 U	1.17 U	0.944 U
VINYL ACETATE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U
VINYL CHLORIDE	1.04 U	0.967 U	0.975 U	0.953 U	0.929 U	1.12 U	0.893 U	0.988 U	0.976 U	0.92 U	1.02 U	1.01 U	1.04 UJ	0.955 U	1.17 U	0.944 U

LOCATION [1]	16SB091	16SB091	16SB092	16SB092	16SB093	16SB093	16SB094	16SB095	16SB095	16SB096	16SB096	16SB097	16SB097	16SB097	16SB098	16SB098
SAMPLE ID	16SB0910406-D	16SB0910609	16SB0920406	16SB0920608	16SB0930406	16SB0930608	16SB0940708	16SB0950406	16SB0950607	16SB0960406	16SB0960608	16SB0970406	16SB0970607	16SB0970607-D	16SS0980102	16SB0980206
SAMPLE DATE	20040816	20040816	20040816	20040816	20040816	20040816	20040816	20040816	20040816	20040816	20040816	20040816	20040816	20040816	20040816	20040816
SAMPLE CODE	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SS	SB
DEPTH STATUS	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TOP DEPTH	4	6	4	6	4	6	7	4	6	4	6	4	6	6	1	2
BOTTOM DEPTH	6	9	6	8	6	8	8	6	7	6	8	6	7	7	2	6
EXPLOSIVES (MG/KG)																
1,3,5-TRINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-AMINO-4,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRYL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/KG)																
1,1,1,2-TETRACHLOROETHANE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 UJ	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
1,1,1-TRICHLOROETHANE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
1,1,2,2-TETRACHLOROETHANE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
1,1,2-TRICHLOROETHANE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
1,1-DICHLOROETHENE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
1,2-DIBROMOETHANE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
1,2-DICHLOROPROPANE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	90.8 U	102 U	90.9 U	96 U	103 U	109 U	128 U	102 UJ	101 U	96.6 U	101 U	95.7 U	105 U	97.6 U	106 U	108 U
2-BUTANONE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
2-HEXANONE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
3-CHLOROPROPENE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
4-METHYL-2-PENTANONE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
ACETONE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	4 J	7 J	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 J	0.922 U
ACETONITRILE	36.3 U	40.9 U	36.4 U	38.4 U	41.3 U	43.6 U	51.4 U	40.9 U	40.6 U	38.6 U	40.4 U	38.3 U	41.9 U	39 U	42.4 U	43.2 U
ACROLEIN	0.908 UR	0.974 UR	0.932 UR	0.869 UR	0.95 UR	1.05 UR	1.48 UR	1.01 UR	1.05 UR	0.966 UR	1.06 UR	0.957 UR	1.09 UR	1.02 UR	1.24 UR	0.922 UR
ACRYLONITRILE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
BENZENE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
BROMODICHLOROMETHANE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
BROMOFORM	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
BROMOMETHANE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
CARBON DISULFIDE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
CARBON TETRACHLORIDE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
CHLOROBENZENE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
CHLORODIBROMOMETHANE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
CHLOROETHANE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
CHLOROFORM	7	6	0.932 U	0.869 U	3	4	1.48 U	10	15	2 J	1.06 U	12 J	1.09 U	1.02 U	1.24 U	0.922 U
CHLOROMETHANE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
CHLOROPRENE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
CIS-1,2-DICHLOROETHENE	2 J	3 J	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
CIS-1,3-DICHLOROPROPENE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIBROMOMETHANE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
DICHLORODIFLUOROMETHANE	3 J	2 J	1 J	5 J	8	12	26	1.01 J	6	4	2 J	6	5	2 J	1.24 U	1 J
ETHYL METHACRYLATE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
ETHYLBENZENE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
ISOBUTANOL	36.3 U	40.9 U	36.4 U	38.4 U	41.3 U	43.6 U	51.4 U	40.9 U	40.6 U	38.6 U	40.4 U	38.3 U	41.9 U	39 U	42.4 U	43.2 U
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHACRYLONITRILE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL IODIDE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
METHYL METHACRYLATE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	0.908 UJ	0.974 UJ	0.932 UJ	0.869 UJ	0.95 UJ	1.05 UJ	1.48 UJ	1.01 UJ	1.05 UJ	0.966 UJ	1.06 UJ	0.957 UJ	1.09 UJ	1.02 UJ	1.24 UJ	0.922 UJ
PROPIONITRILE	36.3 U	40.9 U	36.4 U	38.4 U	41.3 U	43.6 U	51.4 U	40.9 U	40.6 U	38.6 U	40.4 U	38.3 U	41.9 U	39 U	42.4 U	43.2 U
STYRENE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
TETRACHLOROETHENE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
TOLUENE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
TOTAL XYLENES	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
TRANS-1,2-DICHLOROETHENE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
TRANS-1,3-DICHLOROPROPENE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
TRANS-1,4-DICHLORO-2-BUTENE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
TRICHLOROETHENE	1500 J	980	32	28	250 J	360	20	9000	2000	120 J	11	1200	88 J	8 J	170	140
TRICHLOROFLUOROMETHANE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	2 J	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
VINYL ACETATE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U
VINYL CHLORIDE	0.908 U	0.974 U	0.932 U	0.869 U	0.95 U	1.05 U	1.48 U	1.01 U	1.05 U	0.966 U	1.06 U	0.957 U	1.09 U	1.02 U	1.24 U	0.922 U

LOCATION (1)	16SB098	16SB099	16SB099	16SB099	16SB118	16SB118	16SB119	16SB119	16SB120	16SB120	16SB120	16SB121	16SB121	16SB122	16SB122	16SB123
SAMPLE ID	16SB0980607	16SS0990102	16SB0990206	16SB0990608	16SB1180206	16SB1180607	16SB1190406	16SB1190608	16SB1200406	16SB1200608	16SB1200608-D	16SB1210306	16SB1210607	16SB1220406	16SB1220910	16SB1230306
SAMPLE DATE	20040816	20040816	20040816	20040816	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SS	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
DEPTH STATUS	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	EXCAVATED
TOP DEPTH	6	1	2	6	2	6	4	6	4	6	6	3	6	4	9	3
BOTTOM DEPTH	7	2	6	8	6	7	6	8	6	8	8	6	7	6	10	6
EXPLOSIVES (MG/KG)																
1,3,5-TRINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-AMINO-4,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRYL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/KG)																
1,1,1,2-TETRACHLOROETHANE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-TRICHLOROETHANE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	0.929 U	0.98 U	1.11 U	1.06 U	0.544 U	0.532 U	0.525 U	0.303 U	0.333 U	0.311 U	0.5251 U	0.3 U	0.532 U	0.312 U	0.548 U	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	0.59 U
1,1-DICHLOROETHENE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	95.1 U	96.8 U	99.8 U	111 U	--	--	--	--	--	--	--	--	--	--	--	--
2-BUTANONE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
3-CHLOROPROPENE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
ACETONE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
ACETONITRILE	38 U	38.7 U	39.9 U	44.3 U	--	--	--	--	--	--	--	--	--	--	--	--
ACROLEIN	0.929 UR	0.98 UR	1.11 UR	1.06 UR	--	--	--	--	--	--	--	--	--	--	--	--
ACRYLONITRILE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
BENZENE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
BROMOFORM	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
BROMOMETHANE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROETHANE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROFORM	0.929 U	1 J	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROPRENE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	0.929 U	0.98 U	1.11 U	1.06 U	16.4	34.1	35.9	0.525	7.31 J	17.6 J	49.45 J	2.77	1.91	2.78	11.2	120
CIS-1,3-DICHLOROPROPENE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIBROMOMETHANE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	0.929 U	5 J	6 J	10 J	--	--	--	--	--	--	--	--	--	--	--	--
ETHYL METHACRYLATE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
ISOBUTANOL	38 U	38.7 U	39.9 U	44.3 U	--	--	--	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHACRYLONITRILE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL IODIDE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
METHYL METHACRYLATE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	0.929 UJ	0.98 UJ	1.11 UJ	1.06 UJ	--	--	--	--	--	--	--	--	--	--	--	--
PROPIONITRILE	38 U	38.7 U	39.9 U	44.3 U	--	--	--	--	--	--	--	--	--	--	--	--
STYRENE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
TOLUENE	1 J	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	0.929 U	0.98 U	1.11 U	1.06 U	0.308 J	0.55 J	1.1	0.303 U	0.344 J	0.368 J	2.14 J	0.3 U	0.532 U	0.312 U	0.548 U	13
TRANS-1,3-DICHLOROPROPENE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,4-DICHLORO-2-BUTENE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	200 J	103 J	630	160	4.03	16.1	4.02	0.333 U	5.6	2.13 J	6.68 J	0.904	1.06	1.9	4.39	190
TRICHLOROFLUOROMETHANE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
VINYL ACETATE	0.929 U	0.98 U	1.11 U	1.06 U	--	--	--	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	0.929 U	0.98 U	1.11 U	1.06 U	0.544 U	0.31 J	0.823 J	0.303 U	0.333 U	0.311 U	0.7956 J	0.3 U	0.532 U	0.312 U	0.548 U	2

LOCATION [1]	16SB123	16SB124	16SB124	16SB125	16SB125	16SB126	16SB126	16SB127	16SB127	16SB128	16SB128	16SB128	16SB128	16SB129	16SB129	16SB130
SAMPLE ID	16SB1230608	16SB1240306	16SB1240911	16SB1250306	16SB1250607	16SS1260002	16SB1260205	16SS1270002	16SB1270206	16SS1280002	16SS1280002-D	16SB1280206	16SB1280607	16SS1290002	16SB1290206	16SS1300002
SAMPLE DATE	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SS	SB	SS	SB	SS	SS	SB	SB	SS	SB	SS
DEPTH STATUS	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED
TOP DEPTH	6	3	9	3	6	0	2	0	2	0	0	2	6	0	2	0
BOTTOM DEPTH	8	6	11	6	7	2	5	2	6	2	2	6	7	2	6	2
EXPLOSIVES (MG/KG)																
1,3,5-TRINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-AMINO-4,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRYL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/KG)																
1,1,1,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	0.5355 U	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	0.55 U	0.63 U	0.56 U	0.59 U	0.56 U	0.51 U	0.6 U	0.51 U	0.54 U	0.52 U	--	0.52 U	0.57 U	0.52 U	0.52 U	0.67 U
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-CHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACETONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACROLEIN	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACRYLONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROPRENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	63	20	12	41	23	0.51 U	0.6 U	0.51 U	0.54 U	0.52 U	0.5355 U	0.52 U	0.57 U	0.52 U	0.52 U	0.67 U
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYL METHACRYLATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ISOBUTANOL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHACRYLONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL IODIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL METHACRYLATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PROPIONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	7	0.57 J	0.56 U	1	0.67 J	0.51 U	0.6 U	0.51 U	0.54 U	0.52 U	0.5355 U	0.52 U	0.57 U	0.52 U	0.52 U	0.67 U
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,4-DICHLORO-2-BUTENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	150	110	63	95	57	0.51 U	0.6 U	0.51 U	44	0.52 U	0.5893 U	18	41	0.52 U	65	0.67 U
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VINYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	1	0.63 U	0.56 U	0.59 U	0.56 U	0.51 U	0.6 U	0.51 U	0.54 U	0.52 U	0.5355 U	0.52 U	0.57 U	0.52 U	0.52 U	0.67 U

LOCATION [1]	16SB130	16SB130	16SB131	16SB131	16SB132	16SB132	16SB132	16SB133	16SB133	16SB134	16SB134	16SB134	16SB135	16SB135	16SB136	16SB136
SAMPLE ID	16SB1300206	16SB1300607	16SS1310002	16SB1310206	16SS1320002	16SB1320206	16SB1320608	16SS1330002	16SB1330206	16SS1340002	16SB1340206	16SB1340607	16SB1350002	16SB1350206	16SS1360002	16SB1360206
SAMPLE DATE	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SS	SB	SS	SB	SB	SS	SB	SS	SB	SB	SS	SB	SS	SB
DEPTH STATUS	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED
TOP DEPTH	2	6	0	2	0	2	6	0	2	0	2	6	0	2	0	2
BOTTOM DEPTH	6	7	2	6	2	6	8	2	6	2	6	7	2	6	2	6
EXPLOSIVES (MG/KG)																
1,3,5-TRINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-AMINO-4,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRYL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/KG)																
1,1,1,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	0.45 U	0.487 U	0.493 U	0.507 U	0.502 U	0.449 U	0.484 U	0.539 U	0.491 U	0.48 U	0.511 U	0.573 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	0.52 U	0.73 U	0.72 U	0.69 U	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-CHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACETONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACROLEIN	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACRYLONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROPRENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	0.52 U	0.48 J	0.72 U	0.69 U	0.45 U	0.487 U	0.493 U	0.507 U	0.502 U	0.449 U	0.484 U	0.647 J	0.491 U	4.86	0.511 U	0.573 U
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYL METHACRYLATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ISOBUTANOL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHACRYLONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL IODIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL METHACRYLATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PROPIONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	0.52 U	0.73 U	0.72 U	0.69 U	0.45 U	0.487 U	0.493 U	0.507 U	0.502 U	0.449 U	0.484 U	0.539 U	0.491 U	4.28	0.511 U	0.573 U
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,4-DICHLORO-2-BUTENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	27	160	0.72 U	37	0.495 U	1.2	2.99	0.557 U	0.561 J	0.494 U	62.7	780	3.21	96.6 J	0.681 J	3.28
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VINYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	0.52 U	0.73 U	0.72 U	0.69 U	0.45 U	0.487 U	0.493 U	0.507 U	0.502 U	0.449 U	0.484 U	0.539 U	0.491 U	0.48 U	0.511 U	0.573 U

LOCATION [1]	16SB136	16SB137	16SB137	16SB137	16SB138	16SB138	16SB138	16SB139	16SB139	16SB140	16SB140	16SB141	16SB141	16SB141	16SB142	16SB142
SAMPLE ID	16SB1360607	16SS1370002	16SB1370205	16SB1370205-D	16SS1380002	16SB1380206	16SB1380608	16SS1390002	16SB1390206	16SS1400002	16SB1400206	16SS1410002	16SB1410206	16SB1410709	16SS1420002	16SB1420204
SAMPLE DATE	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110824	20110825	20110825	20110825	20110825	20110825
SAMPLE CODE	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SS	SB	SB	SS	SB	SB	SS	SB	SS	SB	SS	SB	SB	SS	SB
DEPTH STATUS	EXCAVATED	NORMAL	NORMAL	NORMAL	EXCAVATED	EXCAVATED	EXCAVATED	NORMAL	NORMAL	EXCAVATED	EXCAVATED	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TOP DEPTH	6	0	2	2	0	2	6	0	2	0	2	0	2	7	0	2
BOTTOM DEPTH	7	2	5	5	2	6	8	2	6	2	6	2	6	9	2	4
EXPLOSIVES (MG/KG)																
1,3,5-TRINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-AMINO-4,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRYL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/KG)																
1,1,1,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	0.523 U	0.516 U	0.523 U	0.4947 U	0.519 U	0.514 J	0.374 J	0.287 U	0.308 U	0.492 U	0.517 U	0.5 U	0.536 U	0.33 U	0.519 U	0.578 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-CHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACETONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACROLEIN	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACRYLONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROPRENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	0.523 U	0.516 U	0.523 U	0.4947 U	0.519 U	17.7	2.44	0.287 U	0.21 J	0.492 U	9.46	0.5 U	0.536 U	0.33 U	0.519 U	0.578 U
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYL METHACRYLATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ISOBUTANOL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHACRYLONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL IODIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL METHACRYLATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PROPIONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	0.523 U	0.499 J	0.523 U	0.4947 U	0.519 U	18.9	1.52	0.287 U	0.308 U	0.492 U	0.517 U	0.5 U	0.536 U	0.33 U	0.519 U	0.578 U
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,4-DICHLORO-2-BUTENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	3.28	14.6	0.576 UJ	7.4 J	2.76	1280	462	0.315 U	1.37	0.541 U	14.4	0.55 U	4.69	3.3	0.571 U	1.39
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VINYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	0.523 U	0.516 U	0.523 U	0.4947 U	0.519 U	0.497 U	0.478 U	0.287 U	0.308 U	0.492 U	1.76	0.5 U	0.536 U	0.33 U	0.519 U	0.578 U

LOCATION [1]	16SB143	16SB143	16SB143	16SB144	16SB144	16SB145	16SB145	16SB145	16SB146	16SB146	16SB146	16SB147	16SB147	16SB148	16SB148	16SB149
SAMPLE ID	16SS1430002	16SB1430205	16SB1430205-D	16SS1440002	16SB1440204	16SS1450002	16SS1450002-D	16SB1450203	16SS1460002	16SB1460205	16SB1460205-D	16SS1470002	16SB1470206	16SS1480002	16SB1480206	16SS1490002
SAMPLE DATE	20110825	20110825	20110826	20110825	20110825	20110825	20110826	20110825	20110825	20110825	20110825	20110825	20110825	20110825	20110825	20110825
SAMPLE CODE	NORMAL	ORIG	DUP	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SS	SB	SB	SS	SB	SS	SS	SB	SS	SB	SB	SS	SB	SS	SB	SS
DEPTH STATUS	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED
TOP DEPTH	0	2	2	0	2	0	0	2	0	2	2	0	2	0	2	0
BOTTOM DEPTH	2	5	5	2	4	2	2	3	2	5	5	2	6	2	6	2
EXPLOSIVES (MG/KG)																
1,3,5-TRINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-AMINO-4,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRYL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/KG)																
1,1,1,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	0.501 U	0.582 U	0.5565 U	0.533 U	0.514 U	0.529 U	0.5142 U	0.533 U	0.487 U	0.488 U	0.5164 U	0.511 U	0.581 U	0.533 U	0.592 U	0.499 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-CHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACETONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACROLEIN	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACRYLONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROPRENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	0.501 U	0.582 U	0.5565 U	0.533 U	0.514 U	0.529 U	0.5142 U	0.533 U	0.487 U	0.488 U	0.5164 U	0.775 J	0.494 J	0.533 U	0.592 U	0.499 U
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYL METHACRYLATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ISOBUTANOL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHACRYLONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL IODIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL METHACRYLATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PROPIONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	0.501 U	0.582 U	0.5565 U	0.533 U	0.514 U	0.529 U	0.5142 U	0.533 U	0.487 U	0.488 U	0.5164 U	0.511 U	0.581 U	0.533 U	0.592 U	0.499 U
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,4-DICHLORO-2-BUTENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	0.551 U	0.641 U	0.6124 U	0.586 U	0.566 U	0.582 U	0.565 U	0.587 U	22.2	51.4	68.5	19.3	12.3 J	5.57	2.66	87.8
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VINYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	0.501 U	0.582 U	0.5565 U	0.533 U	0.514 U	0.529 U	0.5142 U	0.533 U	0.487 U	0.488 U	0.5164 U	0.511 U	0.581 U	0.533 U	0.592 U	0.499 U

TABLE A.2-2
SOIL SAMPLE ANALYTICAL RESULTS FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION [1]	16SB149	16SB150	16SB150	16SB151	16SB151	16SB152	16SB152	16SB153	16SB153	16SB191	16SB191	16SB191	16SB192	16SB192	16SB192	16SB193
SAMPLE ID	16SB1490206	16SB1500002	16SB1500205	16SS1510002	16SB1510204	16SS1520002	16SB1520203	16SS1530002	16SB1530206	16SS1910002	16SB1910206	16SB1910608	16SS1920002	16SB1920206	16SB1920709	16SS1930002
SAMPLE DATE	20110825	20110825	20110825	20110825	20110825	20110825	20110825	20110825	20110825	20110823	20110823	20110823	20110823	20110823	20110823	20110823
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SS	SB	SS	SB	SS	SB	SS	SB	SS	SB	SB	SS	SB	SB	SS
DEPTH STATUS	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TOP DEPTH	2	0	2	0	2	0	2	0	2	0	2	6	0	2	7	0
BOTTOM DEPTH	6	2	5	2	4	2	3	2	6	2	6	8	2	6	9	2
EXPLOSIVES (MG/KG)																
1,3,5-TRINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-AMINO-4,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRYL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/KG)																
1,1,1,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
1,1,2-TRICHLOROETHANE	0.358 J	0.5 U	0.518 U	0.501 U	0.537 U	0.539 U	0.569 U	0.519 U	0.518 U	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	2.32 U	1.63 U	1.47 U	2.7 U	2.88 U	1.56 U	2.79 U
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
1,2,3-TRICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
1,4-DIOXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--	3.55 J	2.12 J	1.38 U	1.53 J	5.52	1.75 J	4.03 J
2-HEXANONE	--	--	--	--	--	--	--	--	--	2.17 U	1.53 U	1.38 U	2.53 U	2.7 U	1.46 U	2.61 U
3-CHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--	1.81 U	1.27 U	1.15 U	2.11 U	2.25 U	1.22 U	2.18 U
ACETONE	--	--	--	--	--	--	--	--	--	19	9.63	2.27 J	14.2	41.5	12.3	36.7
ACETONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACROLEIN	--	--	--	--	--	--	--	--	--	2.24 U	1.58 U	1.42 U	2.61 U	2.79 U	1.51 U	2.7 U
ACRYLONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--	0.246 J	0.285 J	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
BROMOFORM	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
BROMOMETHANE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--	1.98 J	1.27 U	1.15 U	2.11 U	2.25 U	1.22 U	2.18 U
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
CHLOROBENZENE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
CHLOROETHANE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
CHLOROFORM	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
CHLOROMETHANE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
CHLOROPRENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	0.608 J	0.5 U	0.518 U	1.34	0.295 J	0.539 U	0.569 U	0.519 U	0.518 U	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	0.934	0.235 J	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
DIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--	0.492 U	0.347 U	0.313 U	0.573 U	0.611 U	0.331 U	0.592 U
ETHYL METHACRYLATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--	0.434 U	0.556	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
ISOBUTANOL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	0.434 U	0.382 J	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
METHACRYLONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--	2.4 U	2 J	1.53 U	1.53 J	3.15 J	1.62 U	1.85 J
METHYL IODIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL METHACRYLATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--	2.89 U	2.04 U	1.84 U	3.37 U	3.59 U	1.95 U	3.48 U
PROPIONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
TETRACHLOROETHENE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
TOLUENE	--	--	--	--	--	--	--	--	--	0.68 J	0.831	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
TOTAL XYLENES	--	--	--	--	--	--	--	--	--	0.326 J	2.88	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
TRANS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.518 U	0.501 U	0.537 U	0.539 U	0.569 U	0.519 U	0.518 U	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
TRANS-1,4-DICHLORO-2-BUTENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	207	73.6	329	123	220	185	173	157	236	0.478 U	0.336 U	0.303 U	0.557 U	0.593 U	0.322 U	0.575 U
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U
VINYL ACETATE	--	--	--	--	--	--	--	--	--	1.81 U	1.27 U	1.15 U	2.11 U	2.25 U	1.22 U	2.18 U
VINYL CHLORIDE	0.5 U	0.5 U	0.518 U	0.501 U	0.537 U	0.539 U	0.569 U	0.519 U	0.518 U	0.434 U	0.306 U	0.276 U	0.506 U	0.539 U	0.292 U	0.522 U

LOCATION [1]	16SB193	16SB193	16SB194	16SB194	16SB194	16SB195	16SB195	16SB195	16SB196	16SB196	16SB196	16SB196	16SB197	16SB197	16SB197	16SB198
SAMPLE ID	16SB1930206	16SB1930608	16SS1940002	16SB1940206	16SB1940810	16SS1950002	16SB1950206	16SB1950709	16SS1960002	16SB1960206	16SB1960206-D	16SB1961012	16SS1970002	16SB1970206	16SB1970607	16SS1980002
SAMPLE DATE	20110823	20110823	20110823	20110823	20110823	20110823	20110823	20110823	20110823	20110823	20110823	20110823	20110823	20110823	20110823	20110823
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
SUBMATRIX	SB	SB	SS	SB	SB	SS	SB	SB	SS	SB	SB	SB	SS	SB	SB	SS
DEPTH STATUS	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TOP DEPTH	2	6	0	2	8	0	2	7	0	2	2	10	0	2	6	0
BOTTOM DEPTH	6	8	2	6	10	2	6	9	2	6	6	12	2	6	7	2
EXPLOSIVES (MG/KG)																
1,3,5-TRINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-AMINO-4,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRYL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/KG)																
1,1,1,2-TETRACHLOROETHANE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
1,1,1-TRICHLOROETHANE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 UJ	0.546 U	0.494 U
1,1,2,2-TETRACHLOROETHANE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
1,1,2-TRICHLOROETHANE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
1,1,2-TRICHLOROTRIFLUOROETHANE	1.77 U	2.64 U	1.47 U	1.7 U	1.59 U	2 U	2.8 U	2.4 U	1.61 U	1.73 U	1.63 U	1.55 U	1.71 U	2.8 U	2.91 U	2.64 U
1,1-DICHLOROETHANE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 UJ	0.546 U	0.494 U
1,1-DICHLOROETHENE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 UJ	0.546 U	0.494 U
1,2,3-TRICHLOROBENZENE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 UJ	0.546 U	0.494 U
1,2,3-TRICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 UJ	0.546 U	0.494 U
1,2-DIBROMO-3-CHLOROPROPANE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
1,2-DIBROMOETHANE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
1,2-DICHLOROBENZENE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 UJ	0.546 U	0.494 U
1,2-DICHLOROETHANE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
1,2-DICHLOROPROPANE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
1,3-DICHLOROBENZENE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 UJ	0.546 U	0.494 U
1,4-DICHLOROBENZENE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 UJ	0.546 U	0.494 U
1,4-DIOXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-BUTANONE	1.67 J	1.39 J	1.97 J	1.14 J	2.89	2.43 J	6.55	1.44 J	4.73	1.63 U	2.77	0.758 J	7.38	4.95	2.73 U	18.7 J
2-HEXANONE	1.66 U	2.47 U	1.37 U	1.6 U	1.49 U	1.87 U	2.63 U	2.25 U	1.51 U	1.63 U	1.53 U	1.46 U	1.6 U	2.62 U	2.73 U	2.47 U
3-CHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	1.38 U	2.06 U	1.15 U	1.33 U	1.24 U	1.56 U	2.19 U	1.87 U	1.26 U	1.36 U	1.27 U	1.21 U	1.33 U	2.18 U	2.27 U	2.06 U
ACETONE	6.86	9.44	19.5	7.91	18.2	20.5	27.3	10.3	32.4	2.57 J	18.8 J	6.4	56.8	26.1	7.76	90.3 J
ACETONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACROLEIN	1.71 U	2.55 U	1.42 U	1.65 U	1.54 U	1.94 U	2.72 U	2.32 U	1.56 U	1.68 U	1.58 U	1.51 U	1.65 U	2.71 UJ	2.82 U	2.55 UJ
ACRYLONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BENZENE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	1.8	0.449 U	0.443 J	0.325 U	0.306 U	0.291 U	0.32 U	0.524 UJ	0.546 U	0.494 UJ
BROMODICHLOROMETHANE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
BROMOFORM	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
BROMOMETHANE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
CARBON DISULFIDE	1.38 U	2.06 U	1.15 U	1.04 J	1.24 U	1.56 U	2.19 U	1.87 U	1.19 J	1.36 U	1.27 U	0.656 J	1.33 U	2.18 U	2.27 U	2.06 U
CARBON TETRACHLORIDE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 UJ	0.546 U	0.494 U
CHLOROBENZENE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 UJ	0.546 U	0.494 U
CHLORODIBROMOMETHANE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
CHLOROETHANE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
CHLOROFORM	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
CHLOROMETHANE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.72	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
CHLOROPRENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	0.68	0.536 J	0.275 U	0.319 U	0.432 J	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
CIS-1,3-DICHLOROPROPENE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
CYCLOHEXANE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
DIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	0.376 U	0.56 U	0.311 U	0.362 U	0.338 U	0.425 U	0.596 U	0.509 U	0.342 U	0.369 U	0.346 U	0.33 U	0.363 U	0.594 U	0.618 U	0.56 U
ETHYL METHACRYLATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	14.4	0.449 U	0.297 J	0.325 U	0.306 U	0.291 U	0.32 U	0.524 UJ	0.546 U	0.494 U
ISOBUTANOL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	15.4	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
METHACRYLONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL ACETATE	1.84 U	2.74 U	1.39 J	1.77 U	1.65 U	2.07 U	2.91 U	2.49 U	1.67 U	1.8 U	1.69 U	1.61 U	4.26	2.32 J	3.02 U	17.2
METHYL IODIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL METHACRYLATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
METHYLENE CHLORIDE	2.21 U	3.3 U	1.83 U	2.13 U	1.99 U	2.5 U	3.5 U	3 U	2.01 U	2.17 U	2.04 U	1.94 U	2.13 U	3.49 U	3.64 U	4.94 U
PROPIONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
STYRENE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 UJ	0.546 U	0.494 U
TETRACHLOROETHENE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
TOLUENE	1.65	0.494 U	0.275 U	0.208 J	0.288 J	0.219 J	7.32	0.449 U	1.02	0.325 U	0.239 J	0.291 U	0.32 U	0.9 J	0.546 U	0.478 J
TOTAL XYLENES	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	89.7	0.449 U	0.675	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
TRANS-1,2-DICHLOROETHENE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 UJ	0.546 U	0.494 U
TRANS-1,3-DICHLOROPROPENE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
TRANS-1,4-DICHLORO-2-BUTENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	0.365 U	0.544 U	0.302 U	0.351 U	0.328 U	0.412 U	0.578 U	0.494 U	0.332 U	0.358 U	0.336 U	0.321 U	0.352 U	0.577 UJ	0.6 U	0.544 U
TRICHLOROFLUOROMETHANE	0.332 U	0.494 U	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	0.524 U	0.546 U	0.494 U
VINYL ACETATE	1.38 U	2.06 U	1.15 U	1.33 U	1.24 U	1.56 U	2.19 U	1.87 U	1.26 U	1.36 U	1.27 U	1.21 U	1.33 U	2.18 U	2.27 U	2.06 U
VINYL CHLORIDE	1.56	1.29	0.275 U	0.319 U	0.298 U	0.375 U	0.526 U	0.449 U	0.302 U	0.325 U	0.306 U	0.291 U	0.32 U	2.37 J	2.24	0.494 U

TABLE A.2-2
SOIL SAMPLE ANALYTICAL RESULTS FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION [1]	16SB198	16SB198	16SB198	16SB199	16SB199	16SB200	16SB200	16SB201	16SB202	16SB203	16SB204	16SB204	16SB204	16SB205	16SB205	16SB205
SAMPLE ID	16SS1980002-D	16SB1980206	16SB1980607	16SB1990406	16SB1990709	16SS2000002	16SB2000204	16SB2010203	16SB2020204	16SB2030203	16SS2040002	16SB2040206	16SB2040709	16SS2050002	16SB2050206	16SB2050607
SAMPLE DATE	20110823	20110823	20110823	20110824	20110824	20131205	20110825	20110825	20110825	20110825	20110825	20110825	20110825	20110825	20110825	20110825
SAMPLE CODE	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SS	SB	SB	SB	SB	SS	SB	SB	SB	SB	SS	SB	SB	SS	SB	SB
DEPTH STATUS	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED
TOP DEPTH	0	2	6	4	7	0	2	2	2	2	0	2	7	0	2	6
BOTTOM DEPTH	2	6	7	6	9	2	4	3	4	3	2	6	9	2	6	7
EXPLOSIVES (MG/KG)																
1,3,5-TRINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-AMINO-4,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRYL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/KG)																
1,1,1,2-TETRACHLOROETHANE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-TRICHLOROETHANE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	0.522 U	0.538 U	0.509 U	0.495 U	0.524 U	119 UJ	0.546 U	0.504 U	0.533 U	0.521 U	0.471 U	2.74	0.478 U	0.365 J	1.32	1.83
1,1,2-TRICHLOROTRIFLUOROETHANE	2.79 U	2.87 U	2.71 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-BUTANONE	54.9 J	6.45	3.04 J	--	--	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	1.97 J	2.69 U	2.54 U	--	--	--	--	--	--	--	--	--	--	--	--	--
3-CHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	2.18 U	2.24 U	2.12 U	--	--	--	--	--	--	--	--	--	--	--	--	--
ACETONE	298 J	72.8	21.2	--	--	--	--	--	--	--	--	--	--	--	--	--
ACETONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACROLEIN	9.78 J	2.78 U	2.63 U	--	--	--	--	--	--	--	--	--	--	--	--	--
ACRYLONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BENZENE	1.54 J	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMOFORM	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMOMETHANE	0.27 J	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	2.18 U	2.24 U	2.12 U	--	--	--	--	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	0.522 U	0.538 U	0.509 U	--	--	119 UJ	--	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROETHANE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROFORM	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROPRENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	0.522 U	0.538 U	0.509 U	0.495 U	0.524 U	111 J	1790	0.378 J	0.533 U	0.521 U	0.628 J	46.9	4.23	32.5 J	109	168
CIS-1,3-DICHLOROPROPENE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
DIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	0.592 U	0.609 U	0.576 U	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYL METHACRYLATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
ISOBUTANOL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
METHACRYLONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL ACETATE	17	4.12 J	2.81 U	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL IODIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL METHACRYLATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	3.48 U	3.58 U	3.39 U	--	--	--	--	--	--	--	--	--	--	--	--	--
PROPIONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
STYRENE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	0.522 U	0.538 U	0.509 U	--	--	119 UJ	--	--	--	--	--	--	--	--	--	--
TOLUENE	0.383 J	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	0.522 U	0.538 U	0.509 U	0.495 U	0.524 U	119 UJ	24.3	0.504 U	0.533 U	0.521 U	0.471 U	0.5 U	0.478 U	0.523 J	2.1	3.33
TRANS-1,3-DICHLOROPROPENE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,4-DICHLORO-2-BUTENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	0.575 U	0.592 U	0.559 U	0.454 J	0.323 J	652 J	37500	0.555 U	16	0.373 J	45.6	546	57.9	234	1250	2080
TRICHLOROFLUOROMETHANE	0.522 U	0.538 U	0.509 U	--	--	--	--	--	--	--	--	--	--	--	--	--
VINYL ACETATE	2.18 U	2.24 U	2.12 U	--	--	--	--	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	0.522 U	0.538 U	0.509 U	0.495 U	0.524 U	119 UJ	2.26	0.504 U	0.533 U	0.521 U	0.471 U	0.5 U	0.478 U	0.498 U	0.474 U	0.511 U

TABLE A.2-2
SOIL SAMPLE ANALYTICAL RESULTS FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION [1]	16SB206	16SB206	16SB207	16SB208	16SB209	16SB209	16SB210	16SB211	16SB212	16SB213	16SB214	16SB215	16SB215	16SB216	16SB217	16SB218
SAMPLE ID	**16SS2060002**	**16SB2060204**	**16SS207-0002**	**16SS208-0002**	**16SS209-0002**	**16SB209-0203**	**16SS210-0002**	**16SS211-0002**	**16SS212-0002**	**16SS213-0002**	**16SS214-0002**	**16SS215-0002**	**16SS215-0002-D**	**16SS216-0002**	**16SS217-0002**	**16SS218-0002**
SAMPLE DATE	**20110825**	**20110825**	**20121006**	**20121006**	**20121006**	**20121006**	**20121006**	**20121006**	**20121006**	**20121006**	**20121006**	**20121006**	**20121006**	**20121006**	**20121006**	**20121006**
SAMPLE CODE	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**ORIG**	**DUP**	**NORMAL**	**NORMAL**	**NORMAL**
SUBMATRIX	**SS**	**SB**	**SS**	**SS**	**SS**	**SB**	**SS**	**SS**	**SS**	**SS**	**SS**	**SS**	**SS**	**SS**	**SS**	**SS**
DEPTH STATUS	**EXCAVATED**	**EXCAVATED**	**NORMAL**	**NORMAL**	**EXCAVATED**	**EXCAVATED**	**EXCAVATED**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**
TOP DEPTH	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
BOTTOM DEPTH	**2**	**4**	**2**	**2**	**2**	**3**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
EXPLOSIVES (MG/KG)																
1,3,5-TRINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-AMINO-4,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRYL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/KG)																
1,1,1,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	0.531 U	0.714 J	2.48 U	2.28 U	2.23 U	3 U	2.54 U	2.99 UJ	2.38 U	2.59 U	2.86 U	2.54 U	2.41 U	2.52 U	2.21 U	2.51 UJ
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-CHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACETONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACROLEIN	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACRYLONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	2.48 U	2.28 U	2.23 U	3 U	2.54 U	2.99 UJ	2.38 U	2.59 U	2.86 U	2.54 U	2.41 U	2.52 U	2.21 U	2.51 UJ
CHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROPRENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	1.42	121	2.48 UJ	2.28 UJ	2.23 UJ	3 UJ	2.54 UJ	2.99 UJ	2.38 UJ	2.59 UJ	2.86 UJ	2.54 UJ	2.41 U	2.52 UJ	2.21 UJ	2.51 UJ
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYL METHACRYLATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ISOBUTANOL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHACRYLONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL IODIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL METHACRYLATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PROPIONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	2.48 U	2.28 U	2.23 U	3 U	2.54 U	2.99 UJ	2.38 U	2.59 U	2.86 U	2.54 U	2.41 U	2.52 U	2.21 U	2.51 UJ
TOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	0.531 U	49.4	2.48 U	2.28 U	2.23 U	3 U	2.54 U	2.99 UJ	2.38 U	2.59 U	2.86 U	2.54 U	2.41 U	2.52 U	2.21 U	2.51 UJ
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,4-DICHLORO-2-BUTENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	11.9	2030	10.4 J	15.3	44.2	45.5 J	2.54 U	13.4 J	23.8	3.49 J	2.86 U	30.1	37.5	3.36 J	1.62 J	21.1 J
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VINYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	0.531 U	0.564 U	2.48 U	2.28 U	2.23 U	3 U	2.54 U	2.99 UJ	2.38 U	2.59 U	2.86 U	2.54 U	2.41 UJ	2.52 U	2.21 U	2.51 UJ

LOCATION [1]	16SB219	16SB219	16SB220	16SB220	16SB236	16SB236	16SB236	16SB237	16SB237	16SB238	16SB238	16SB239	16SB239	16SB240	16SB240	16SB241	16SB241
SAMPLE ID	16SS219-0002	16SB219-0206	16SS220-0002	16SB220-0206	16SS2360002	16SS2360002-D	16SB2360206	16SS2370002	16SB2370206	16SS2380002	16SB2380206	16SS2390002	16SB2390206	16SS2400002	16SB2400206	16SS2410002	16SB2410206
SAMPLE DATE	20121006	20121006	20121006	20121006	20121130	20121130	20121130	20121130	20121130	20121130	20121130	20121130	20121130	20121130	20121130	20121130	20121130
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SS	SB	SS	SB	SS	SS	SB	SS	SB	SS	SB	SS	SB	SS	SB	SS	SB
DEPTH STATUS	EXCAVATED	EXCAVATED	EXCAVATED	EXCAVATED	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TOP DEPTH	0	2	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2
BOTTOM DEPTH	2	6	2	6	2	2	6	2	6	2	6	2	6	2	6	2	6
EXPLOSIVES (MG/KG)																	
1,3,5-TRINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DINITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-AMINO-4,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRYL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/KG)																	
1,1,1,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	2.39 U	2.55 U	2.51 U	2.42 U	2.31 U	2.07 U	2.34 U	2.64 U	2.31 U	2.35 U	2.23 U	2.29 U	1.79 U	2.23 U	2.31 U	2.04 U	2.57 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-CHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACETONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACROLEIN	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ACRYLONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	2.39 U	2.55 U	2.51 U	2.42 U	2.31 U	2.07 U	2.34 U	2.64 U	2.31 U	2.35 U	2.23 U	2.29 U	1.79 U	2.23 U	2.31 U	2.04 U	2.57 U
CHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHLOROPRENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	2.39 UJ	2.55 UJ	2.51 UJ	2.42 U	2.31 U	2.07 U	2.34 U	2.64 U	2.31 U	2.35 U	2.23 U	2.29 U	1.79 U	2.23 U	2.31 U	2.04 U	2.57 U
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYL METHACRYLATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ISOBUTANOL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHACRYLONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL IODIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL METHACRYLATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PROPIONITRILE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	2.39 U	2.55 U	2.51 U	2.42 U	2.31 U	2.07 U	2.34 U	2.64 U	2.31 U	2.35 U	2.23 U	2.29 U	1.79 U	2.23 U	2.31 U	2.04 U	2.57 U
TOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	2.39 U	2.55 U	2.51 U	2.42 U	2.31 U	2.07 U	2.34 U	2.64 U	2.31 U	2.35 U	2.23 U	2.29 U	1.79 U	2.23 U	2.31 U	2.04 U	2.57 U
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,4-DICHLORO-2-BUTENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	2.39 U	56	2.51 U	2.42 U	2.31 U	2.07 U	2.34 U	2.64 U	2.31 U	2.35 U	2.23 U	2.29 U	1.79 U	2.23 U	2.31 U	2.04 U	2.57 U
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VINYL ACETATE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	2.39 U	2.55 U	3.17 J	2.42 UJ	2.31 U	2.07 U	2.34 U	2.64 U	2.31 U	2.35 U	2.23 U	2.29 U	1.79 U	2.23 U	2.31 U	2.04 U	2.57 U

TABLE A.2-3
GROUNDWATER SAMPLE ANALYTICAL RESULTS FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNDS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION	16MW01	16MW01	16MW01	16MW02	16MW02	16MW02	16MW02	16MW02	16MW02	16MW02	16MW02	16MW02	16MW02	16MW03
SAMPLE ID	16GW0101	16GW0102	16GW0103	16GW0201	16GW0203	16GW0204	16GW0205	16GW0206	16GW0207	16GW0208	16GW0209	16GW0210	16GW0210-D	16GW0301
SAMPLE DATE	20030423	20031026	20040826	20030424	20031026	20040825	20050204	20050506	20050814	20060108	20060504	20070426	20070426	20030511
ROUND	01	02	03	01	02	03	04	05	06	07	08	09	09	01
EVENT	PMZ	PMZ	PMZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	NORMAL
EXPLOSIVES (UG/L)														
1,3,5-TRINITROBENZENE	0.65 U	0.26 U	0.27 U	0.21 U	0.24 U	0.27 U	0.278 U	0.26 U	0.26 U	0.27 U	0.25 U	0.24 U	0.24 U	0.45 U
1,3-DINITROBENZENE	0.65 U	0.26 U	0.27 U	0.21 U	0.24 U	0.27 U	0.278 U	0.26 U	0.26 U	0.27 U	0.25 U	0.24 U	0.24 U	0.45 U
2,2',6,6'-TETRANITRO-4,4'-AZOXYTOLUENE	--	0.52 U	--	--	0.48 U	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	0.65 U	0.26 U	0.27 U	0.21 U	0.24 U	0.27 U	0.278 U	0.26 U	0.26 U	0.27 U	0.25 U	0.24 U	0.24 U	0.45 U
2,4-DIAMINO-6-NITROTOLUENE	--	0.26 U	--	--	0.24 U	--	0.278 U	--	0.26 U	--	--	--	--	--
2,4-DINITROTOLUENE	0.65 U	0.26 U	0.27 U	0.21 U	0.24 U	0.27 U	0.278 U	0.26 U	0.26 U	0.27 U	0.25 U	0.24 U	0.24 U	0.45 U
2,6-DIAMINO-4-NITROTOLUENE	--	0.26 U	--	--	0.24 U	--	0.278 U	--	0.26 U	--	--	--	--	--
2,6-DINITROTOLUENE	0.65 U	0.26 U	0.27 U	0.21 U	0.24 U	0.27 U	0.278 U	0.26 U	0.26 U	0.27 U	0.25 U	0.24 U	0.24 U	0.45 U
2-AMINO-4,6-DINITROTOLUENE	0.65 U	0.26 U	0.27 U	0.21 U	0.24 U	0.27 U	0.278 U	0.26 U	0.26 U	0.27 U	0.25 U	0.24 U	0.24 U	0.48 J
2-NITROTOLUENE	0.65 U	0.26 U	0.27 U	0.21 U	0.24 U	0.27 U	0.278 U	0.26 U	0.26 U	0.27 U	0.25 U	0.24 U	0.24 U	0.45 U
3,5-DINITROANILINE	--	0.26 U	--	--	0.24 U	--	0.278 U	--	0.26 U	--	--	--	--	--
3-NITROTOLUENE	0.65 U	0.26 U	0.27 U	0.21 U	0.24 U	0.27 U	0.278 U	0.26 U	0.26 U	0.27 U	0.25 U	0.24 U	0.24 U	0.45 U
4,4'-TN-AZOXY	--	--	--	--	--	--	0.555 U	--	0.52 U	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	0.65 U	0.26 U	0.27 U	0.21 U	0.24 U	0.27 U	0.278 U	0.26 U	0.26 U	0.27 U	0.25 U	0.24 U	0.24 U	0.86 J
4-NITROTOLUENE	0.65 U	0.26 U	0.27 U	0.21 U	0.24 U	0.27 U	0.278 U	0.26 U	0.26 U	0.27 U	0.25 U	0.24 U	0.24 U	0.45 U
DNX	--	0.26 U	--	--	0.24 U	--	0.278 U	--	0.26 U	--	--	--	--	--
HMX	0.65 U	0.26 U	0.27 U	0.21 U	0.24 U	0.27 U	0.278 U	0.26 U	0.26 U	0.27 U	0.25 U	0.24 U	0.24 U	5.7
MNX	--	0.26 U	--	--	0.24 U	--	0.278 U	--	0.26 U	--	--	--	--	--
NITROBENZENE	0.65 U	0.26 U	0.27 U	0.21 U	0.24 U	0.27 U	0.278 U	0.26 U	0.26 U	0.27 U	0.25 U	0.24 U	0.24 U	0.45 U
PICRAMIC ACID	0.39 U	--	--	0.39 U	--	--	--	--	--	--	--	--	--	0.39 U
PICRIC ACID	0.39 U	--	--	0.39 U	--	--	--	--	--	--	--	--	--	0.39 U
RDX	0.6 U	0.26 U	0.27 U	0.195 U	0.24 U	0.27 U	0.278 U	0.26 U	0.26 U	0.27 U	0.25 U	0.24 U	0.24 U	52
TETRYL	0.65 U	0.26 U	0.27 UJ	0.21 U	0.24 U	0.27 UJ	0.278 U	0.26 U	0.26 U	0.27 U	0.25 U	0.24 U	0.24 U	0.45 U
TNX	--	0.26 U	--	--	0.24 U	--	0.278 U	--	0.26 U	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/L)														
1,1,1,2-TETRACHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,1-TRICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2,2-TETRACHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2-TRICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2,3-TRICHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DIBROMO-3-CHLOROPROPANE	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 UJ	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DIBROMOETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-DIOXANE	50 U	50 U	50 U	50 U	50 U	50 U	--	--	--	--	--	--	--	50 UJ
2-BUTANONE	0.5 UR	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 U	--	5 U	0.5 U	0.5 U	0.5 U	0.5 UR
2-HEXANONE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	5 U	0.5 U	0.5 U	0.5 U	0.5 U
3-CHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-METHYL-2-PENTANONE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	5 U	0.5 U	0.5 U	0.5 U	0.5 U
ACETONE	0.5 UR	0.5 UJ	0.5 UJ	0.5 UR	0.5 UJ	0.5 UJ	0.5 U	0.5 U	--	5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR
ACETONITRILE	20 U	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--	--	20 UJ
ACROLEIN	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	--	5 UR	0.5 U	0.5 UR	0.5 UR	0.5 UR
ACRYLONITRILE	0.5 UR	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 U	--	5 U	0.5 U	0.5 U	0.5 U	0.5 UR
BENZENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMODICHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMOFORM	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMOMETHANE	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
CARBON DISULFIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
CARBON TETRACHLORIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	15
CHLOROBENZENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLORODIBROMOMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	1 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	5.6
CHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROPRENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.4 J
CIS-1,3-DICHLOROPROPENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
DIBROMOMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
DICHLORODIFLUOROMETHANE	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	--	1 UJ	0.3 U	0.3 U	0.3 U	0.3 U
ETHANE	--	--	--	--	0.062	--	0.078	--	0.093	--	0.074	--	--	--
ETHENE	--	--	--	--	0.018	--	0.005 U	--	0.007 J	--	0.039	--	--	--
ETHYL METHACRYLATE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
ISOBUTANOL	20 U	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--	--	20 UJ
METHACRYLONITRILE	0.3 UR	0.3 UJ	0.3 U	0.3 UR	0.3 U	0.3 U	0.3 U	0.3 U	--	50 U	0.3 U	3 U	3 U	0.3 UR
METHANE	--	--	--	--	15	--	72	--	75	--	96	--	--	--
METHYL IODIDE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	--	5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL METHACRYLATE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	1 U	0.5 U	0.5 U	0.5 U	--
METHYLENE CHLORIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	2 UJ	0.3 U	0.3 U	0.3 U	0.3 U
PROPIONITRILE	20 U	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--	--	20 UJ
STYRENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
TETRACHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
TOLUENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
TOTAL XYLENES	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,2-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,3-DICHLOROPROPENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,4-DICHLORO-2-BUTENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	2	0.6 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.33 J	0.33 J	5.6
TRICHLOROFLUOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U
VINYL ACETATE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	--	5 U	0.5 U	0.5 U	0.5 U	0.5 U
VINYL CHLORIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	1 U	0.3 U	0.3 U	0.3 U	0.3 U

LOCATION	**16MW03**	**16MW03**	**16MW03**	**16MW03**	**16MW03**	**16MW03**	**16MW03**	**16MW03**	**16MW04**	**16MW04**	**16MW04**	**16MW04**	**16MW04**	**16MW04**
SAMPLE ID	**16GW0302**	**16GW0303**	**16GW0304**	**16GW0305**	**16GW0306**	**16GW0307**	**16GW0308**	**16GW0309**	**16GW0401**	**16GW0402**	**16GW0402-D**	**16GW0403**	**16GW0404**	**16GW0405**
SAMPLE DATE	**20031108**	**20040824**	**20050205**	**20050506**	**20050813**	**20060107**	**20060506**	**20070430**	**20030423**	**20031026**	**20031026**	**20040825**	**20050206**	**20050506**
ROUND	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**01**	**02**	**02**	**03**	**04**	**05**
EVENT	**PUZ**	**PUZ**	**PUZ**	**PUZ**	**PUZ**	**PUZ**	**PUZ**	**PUZ**	**PMZ**	**PMZ**	**PMZ**	**PMZ**	**PMZ**	**PMZ**
SAMPLE CODE	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**DUP**	**NORMAL**	**NORMAL**	**NORMAL**
EXPLOSIVES (UG/L)														
1,3,5-TRINITROBENZENE	0.25 UJ	0.242 U	0.258 U	0.271 U	0.25 U	0.27 U	0.25 U	0.24 U	0.165 U	0.25 U	0.25 U	0.264 U	0.264 U	0.269 U
1,3-DINITROBENZENE	0.25 U	0.242 U	0.258 U	0.271 U	0.25 U	0.27 U	0.25 U	0.24 U	0.165 U	0.25 U	0.25 U	0.264 U	0.264 U	0.269 U
2,2',6,6'-TETRANITRO-4,4'-AZOXYTOLUENE	0.5 U	--	--	--	--	--	--	--	--	0.5 U	0.5 U	--	--	--
2,4,6-TRINITROTOLUENE	0.25 UJ	0.242 U	0.258 U	0.271 U	0.25 U	0.27 U	0.25 U	0.24 U	0.165 U	0.25 U	0.25 U	0.264 U	0.264 U	0.269 U
2,4-DIAMINO-6-NITROTOLUENE	0.25 U	--	0.258 U	--	0.25 U	--	--	--	--	0.25 U	0.25 U	--	0.264 U	--
2,4-DINITROTOLUENE	0.25 UJ	0.242 U	0.258 U	0.271 U	0.25 U	0.27 U	0.25 U	0.24 U	0.165 U	0.25 U	0.25 U	0.264 U	0.264 U	0.269 U
2,6-DIAMINO-4-NITROTOLUENE	0.25 U	--	0.258 U	--	0.25 U	--	--	--	--	0.25 U	0.25 U	--	0.264 U	--
2,6-DINITROTOLUENE	0.25 UJ	0.242 U	0.258 U	0.271 U	0.25 U	0.27 U	0.25 U	0.24 U	0.165 U	0.25 U	0.25 U	0.264 U	0.264 U	0.269 U
2-AMINO-4,6-DINITROTOLUENE	0.62 J	0.89	0.52 J	0.45 J	0.41 J	0.52 J	0.25 U	0.38 J	0.165 U	0.25 U	0.25 U	0.264 U	0.264 U	0.269 U
2-NITROTOLUENE	0.25 UJ	0.242 U	0.258 U	0.271 U	0.25 U	0.27 U	0.25 U	0.24 U	0.165 U	0.25 U	0.25 U	0.264 U	0.264 U	0.269 U
3,5-DINITROANILINE	0.25 U	--	0.258 U	--	0.25 U	--	--	--	--	0.25 U	0.25 U	--	0.264 U	--
3-NITROTOLUENE	0.25 UJ	0.242 U	0.258 U	0.271 U	0.25 U	0.27 U	0.25 U	0.24 U	0.165 U	0.25 U	0.25 U	0.264 U	0.264 U	0.269 U
4,4'-TN-AZOXY	--	--	0.515 U	--	0.5 U	--	--	--	--	--	--	--	0.528 U	--
4-AMINO-2,6-DINITROTOLUENE	1.1	1 J	0.91	0.76	0.72	0.94	0.84	0.24 U	0.165 U	0.25 U	0.25 U	0.264 U	0.264 U	0.269 U
4-NITROTOLUENE	0.25 UJ	0.242 U	0.258 U	0.271 U	0.25 U	0.27 U	0.25 U	0.24 U	0.165 U	0.25 U	0.25 U	0.264 U	0.264 U	0.269 U
DNX	0.25 U	--	0.258 U	--	0.25 U	--	--	--	--	0.25 U	0.25 U	--	0.264 U	--
HMX	7.5	6.1	5.7	5	5.4	6.2 J	5.9	3.9	0.39	0.45 J	0.62	0.264 U	0.264 U	0.269 U
MNX	0.82	--	0.36 J	--	0.32 J	--	--	--	--	0.25 U	0.25 U	--	0.264 U	--
NITROBENZENE	0.25 U	0.242 U	0.258 U	0.271 U	0.25 U	0.27 U	0.25 U	0.24 U	0.165 U	0.25 U	0.25 U	0.264 U	0.264 U	0.269 U
PICRAMIC ACID	--	--	--	--	--	--	--	--	0.39 U	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	0.39 U	--	--	--	--	--
RDX	71	50	55	51	51	57	51	41	1.7	1.9	2.1	0.66	0.58	0.59
TETRYL	0.25 U	0.242 UJ	0.258 U	0.271 U	0.25 U	0.27 U	0.25 U	0.24 U	0.165 U	0.25 U	0.25 U	0.264 UJ	0.264 U	0.269 U
TNX	0.25 U	--	0.258 U	--	0.25 U	--	--	--	--	0.25 U	0.25 U	--	0.264 U	--
VOLATILE ORGANIC COMPOUNDS (UG/L)														
1,1,1,2-TETRACHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,1-TRICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2,2-TETRACHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2-TRICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2,3-TRICHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DIBROMO-3-CHLOROPROPANE	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 UJ	0.3 U	0.3 U	0.3 UJ
1,2-DIBROMOETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-DIOXANE	50 U	50 U	--	--	--	--	--	--	50 U	50 U	50 U	50 U	--	--
2-BUTANONE	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-HEXANONE	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
3-CHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-METHYL-2-PENTANONE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ACETONE	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	5 UJ	0.5 U	0.5 U	0.5 UR	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U
ACETONITRILE	20 U	20 U	--	--	--	--	--	--	20 U	20 U	20 U	20 U	--	--
ACROLEIN	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	5 UR	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR
ACRYLONITRILE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BENZENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMODICHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMOFORM	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMOMETHANE	0.3 UJ	0.3 U	0.3 UJ	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 UJ	0.3 U	0.3 UJ	0.3 U
CARBON DISULFIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CARBON TETRACHLORIDE	11	14	17	14	14	14	16	11	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROBENZENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLORODIBROMOMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROETHANE	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U
CHLOROFORM	3.8	4.2	5.5	4.5	4.7	4	4.6	3.7	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROPRENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.5 J	0.6 J	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CIS-1,3-DICHLOROPROPENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
DIBROMOMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
DICHLORODIFLUOROMETHANE	0.3 UJ	0.3 UJ	0.3 U	0.3 U	0.3 UJ	1 UJ	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U
ETHANE	--	--	0.005 U	--	0.016 J	--	0.017 J	--	--	--	--	--	0.005 U	--
ETHENE	--	--	0.026	--	0.052	--	0.051	--	--	--	--	--	0.005 U	--
ETHYL METHACRYLATE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
ISOBUTANOL	20 U	20 U	--	--	--	--	--	--	20 U	20 U	20 U	20 U	--	--
METHACRYLONITRILE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	50 U	0.3 U	3 U	0.3 UR	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U
METHANE	--	--	0.87	--	0.42	--	2.8	--	--	--	--	--	1.1	--
METHYL IODIDE	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U
METHYL METHACRYLATE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U
METHYL TERT-BUTYL ETHER	--	--	--	--	0.5 U	1 U	0.5 U	0.5 U	--	--	--	--	--	--
METHYLENE CHLORIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	2 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PROPIONITRILE	20 U	20 U	--	--	--	--	--	--	20 U	20 U	20 U	20 U	--	--
STYRENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TETRACHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TOLUENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TOTAL XYLENES	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,2-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,3-DICHLOROPROPENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,4-DICHLORO-2-BUTENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	5	4.3	5	4.5	4.8	5.2	5.7	3.8	0.5 J	0.3 U	0.5 J	0.7 J	1.4	0.7 J
TRICHLOROFLUOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U
VINYL ACETATE	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U
VINYL CHLORIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U

LOCATION	16MW04	16MW04	16MW04	16MW04	16MW05	16MW05	16MW05	16MWT01	16MWT01	16MWT01	16MWT02	16MWT02	16MWT02	16MWT03
SAMPLE ID	16GW0406	16GW0407	16GW0408	16GW0409	16GW0501	16GW0502	16GW0503	16GWT0101	16GWT0102	16GWT0103	16GWT0201	16GWT0202	16GWT0203	16GWT0301
SAMPLE DATE	20050813	20060107	20060506	20070425	20030422	20031026	20040825	20030422	20031109	20040828	20030422	20031026	20040829	20030425
ROUND	06	07	08	09	01	02	03	01	02	03	01	02	03	01
EVENT	PMZ	PMZ	PMZ	PMZ	PMZ	PMZ	PMZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PMZ
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
EXPLOSIVES (UG/L)														
1,3,5-TRINITROBENZENE	0.25 U	0.24 U	0.25 U	0.24 UJ	0.42 U	0.25 U	0.27 U	--	--	0.275 U	0.385 U	0.26 U	0.26 U	0.5 U
1,3-DINITROBENZENE	0.25 U	0.24 U	0.25 U	0.24 UJ	0.42 U	0.25 U	0.27 U	--	--	0.275 U	0.385 U	0.26 U	0.26 U	0.5 U
2,2',6,6'-TETRANITRO-4,4'-AZOXYTOLUENE	--	--	--	--	--	0.5 U	--	--	--	--	--	0.52 U	--	--
2,4,6-TRINITROTOLUENE	0.25 U	0.24 U	0.25 U	0.24 UJ	0.42 U	0.25 U	0.27 U	--	--	0.275 U	0.385 U	0.26 U	0.26 U	0.5 U
2,4-DIAMINO-6-NITROTOLUENE	0.25 U	--	--	--	--	0.25 U	--	--	--	--	--	0.26 U	--	--
2,4-DINITROTOLUENE	0.25 U	0.24 U	0.25 U	0.24 UJ	0.42 U	0.25 U	0.27 U	--	--	0.275 U	0.385 U	0.26 U	0.26 U	0.5 U
2,6-DIAMINO-4-NITROTOLUENE	0.25 U	--	--	--	--	0.25 U	--	--	--	--	--	0.26 U	--	--
2,6-DINITROTOLUENE	0.25 U	0.24 U	0.25 U	0.24 UJ	0.42 U	0.25 U	0.27 U	--	--	0.275 U	0.385 U	0.26 U	0.26 U	0.5 U
2-AMINO-4,6-DINITROTOLUENE	0.25 U	0.24 U	0.25 U	0.24 UJ	0.42 U	0.25 U	0.27 U	--	--	0.275 U	0.385 U	0.26 U	0.26 U	0.5 U
2-NITROTOLUENE	0.25 U	0.24 U	0.25 U	0.24 UJ	0.42 U	0.25 U	0.27 U	--	--	0.275 U	0.385 U	0.26 U	0.26 U	0.5 U
3,5-DINITROANILINE	0.25 U	--	--	--	--	0.25 U	--	--	--	--	--	0.26 U	--	--
3-NITROTOLUENE	0.25 U	0.24 U	0.25 U	0.24 UJ	0.42 U	0.25 U	0.27 U	--	--	0.275 U	0.385 U	0.26 U	0.26 U	0.5 U
4,4'-TN-AZOXY	0.5 U	--	--	--	--	--	--	--	--	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	0.25 U	0.24 U	0.25 U	0.24 UJ	0.42 U	0.25 U	0.27 U	--	--	0.275 U	0.385 U	0.26 U	0.26 U	0.5 U
4-NITROTOLUENE	0.25 U	0.24 U	0.25 U	0.24 UJ	0.42 U	0.25 U	0.27 U	--	--	0.275 U	0.385 U	0.26 U	0.26 U	0.5 U
DNX	0.25 U	--	--	--	--	0.25 U	--	--	--	--	--	0.26 U	--	--
HMX	0.25 U	0.24 U	0.25 U	0.38 J	1.2 J	0.81	1 J	--	--	0.275 U	0.385 U	0.26 U	0.26 U	0.5 U
MNX	0.25 U	--	--	--	--	0.25 U	--	--	--	--	--	0.26 U	--	--
NITROBENZENE	0.25 U	0.24 U	0.25 U	0.24 UJ	0.42 U	0.25 U	0.27 U	--	--	0.275 U	0.385 U	0.26 U	0.26 U	0.5 U
PICRAMIC ACID	--	--	--	--	0.39 U	--	--	--	--	--	0.39 U	--	--	0.39 U
PICRIC ACID	--	--	--	--	0.39 U	--	--	--	--	--	0.39 U	--	--	0.39 U
RDX	0.64	0.85	0.25 U	0.59 J	4.8	1.8	3	--	--	0.275 U	0.79	0.26 U	0.26 U	0.48 U
TETRYL	0.25 U	0.24 U	0.25 U	0.24 UJ	0.42 U	0.25 U	0.27 UJ	--	--	0.275 UJ	0.385 U	0.26 U	0.26 UJ	0.5 U
TNX	0.25 U	--	--	--	--	0.25 U	--	--	--	--	--	0.26 U	--	--
VOLATILE ORGANIC COMPOUNDS (UG/L)														
1,1,1,2-TETRACHLOROETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,1-TRICHLOROETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2,2-TETRACHLOROETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2-TRICHLOROETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	2.1	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.4	0.3 U	0.3 U	0.3 U	0.3 U
1,2,3-TRICHLOROPROPANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DIBROMO-3-CHLOROPROPANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U
1,2-DIBROMOETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROPROPANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-DIOXANE	--	--	--	--	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 UJ
2-BUTANONE	0.5 U	5 U	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 UR
2-HEXANONE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
3-CHLOROPROPENE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-METHYL-2-PENTANONE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ACETONE	0.5 U	5 UJ	0.5 U	1.3 J	0.5 UR	0.5 UJ	0.5 UJ	1.3 J	0.5 UJ	0.5 UJ	0.5 UR	0.5 UJ	0.5 UJ	0.5 UR
ACETONITRILE	--	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 UJ
ACROLEIN	0.5 UR	5 UR	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR
ACRYLONITRILE	0.5 U	5 U	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 UR
BENZENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMODICHLOROMETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMOFORM	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMOMETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 UJ	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U
CARBON DISULFIDE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CARBON TETRACHLORIDE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROBENZENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLORODIBROMOMETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROETHANE	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROMETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROPRENE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.9	42	130	0.3 U	0.8 J	0.3 U	0.3 U
CIS-1,3-DICHLOROPROPENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
DIBROMOMETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
DICHLORODIFLUOROMETHANE	0.3 UJ	1 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 UJ	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 U
ETHANE	0.01 J	--	0.015 J	--	--	0.032	--	--	--	--	--	--	--	--
ETHENE	0.018 J	--	0.048	--	--	0.0093	--	--	--	--	--	--	--	--
ETHYL METHACRYLATE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
ISOBUTANOL	--	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 UJ
METHACRYLONITRILE	0.3 U	50 U	0.3 U	3 U	0.3 UR	0.3 U	0.3 U	0.3 UR	0.3 U	0.3 U	0.3 UR	0.3 UJ	0.3 U	0.3 UR
METHANE	0.34	--	2.3	--	--	0.86	--	--	--	--	--	--	--	--
METHYL IODIDE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ
METHYL METHACRYLATE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
METHYL TERT-BUTYL ETHER	0.5 U	1 U	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	0.3 U	2 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PROPIONITRILE	--	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 UJ
STYRENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TETRACHLOROETHENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TOLUENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TOTAL XYLENES	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,2-DICHLOROETHENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,3-DICHLOROPROPENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,4-DICHLORO-2-BUTENE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	0.9 J	1 U	1 J	1.2	0.5 J	0.5 J	0.3 U	16	230	1100	1.2	6.5	3.5	0.3 U
TRICHLOROFLUOROMETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
VINYL ACETATE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
VINYL CHLORIDE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 J	0.3 U	0.7 J	0.3 U	0.3 U	0.3 U	0.3 U

TABLE A.2-3
GROUNDWATER SAMPLE ANALYTICAL RESULTS FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNDS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION	16MWT03	16MWT03	16MWT04	16MWT04	16MWT04	16MWT04	16MWT04	16MWT04	16MWT04	16MWT04	16MWT04	16MWT04	16MWT04	16MWT05
SAMPLE ID	16GWT0302	16GWT0303	16GWT0401	16GWT0402	16GWT0403	16GWT0404	16GWT0404-D	16GWT0405	16GWT0406	16GWT0407	16GWT0408	16GWT0408-D	16GWT0409	16GWT0501
SAMPLE DATE	20031109	20040828	20030422	20031108	20040815	20050205	20050205	20050507	20050813	20060121	20060508	20060508	20070416	20030424
ROUND	02	03	01	02	03	04	04	05	06	07	08	08	09	01
EVENT	PMZ	PMZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PMZ
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	NORMAL	NORMAL	NORMAL	NORMAL	DUP	NORMAL	NORMAL
EXPLOSIVES (UG/L)														
1,3,5-TRINITROBENZENE	0.255 UJ	0.29 U	0.55 U	0.255 UJ	0.27 U	0.25 U	0.269 U	0.269 U	0.28 U	0.26 U	0.25 U	0.25 U	0.24 U	0.375 U
1,3-DINITROBENZENE	0.255 U	0.29 U	0.55 U	0.255 U	0.27 U	0.25 U	0.269 U	0.269 U	0.28 U	0.26 U	0.25 U	0.25 U	0.24 U	0.375 U
2,2',6,6'-TETRANITRO-4,4'-AZOXYTOLUENE	0.51 U	--	--	0.51 U	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	0.255 UJ	0.29 U	0.55 U	0.255 UJ	0.27 U	0.25 U	0.269 U	0.269 U	0.28 U	0.26 U	0.25 U	0.25 U	0.24 U	0.375 U
2,4-DIAMINO-6-NITROTOLUENE	0.255 U	--	--	0.255 U	--	0.25 U	0.269 U	--	0.28 U	--	--	--	--	--
2,4-DINITROTOLUENE	0.255 UJ	0.29 U	0.55 U	0.255 UJ	0.27 U	0.25 U	0.269 U	0.269 U	0.28 U	0.26 U	0.25 U	0.25 U	0.24 U	0.375 U
2,6-DIAMINO-4-NITROTOLUENE	0.255 U	--	--	0.255 U	--	0.25 U	0.269 U	--	0.28 U	--	--	--	--	--
2,6-DINITROTOLUENE	0.255 UJ	0.29 U	0.55 U	0.255 UJ	0.27 U	0.25 U	0.269 U	0.269 U	0.28 U	0.26 U	0.25 U	0.25 U	0.24 U	0.375 U
2-AMINO-4,6-DINITROTOLUENE	0.255 UJ	0.29 U	0.55 U	0.47 J	0.27 U	0.3 J	0.34 J	0.269 U	0.34 J	0.26 U	0.25 U	0.25 U	0.24 U	0.375 U
2-NITROTOLUENE	0.255 UJ	0.29 U	0.55 U	0.255 UJ	0.27 U	0.25 U	0.269 U	0.269 U	0.28 U	0.26 U	0.25 U	0.25 U	0.24 U	0.375 U
3,5-DINITROANILINE	0.255 U	--	--	0.255 U	--	0.25 U	0.269 U	--	0.28 U	--	--	--	--	--
3-NITROTOLUENE	0.255 UJ	0.29 U	0.55 U	0.255 UJ	0.27 U	0.25 U	0.269 U	0.269 U	0.28 U	0.26 U	0.25 U	0.25 U	0.24 U	0.375 U
4,4'-TN-AZOXY	--	--	--	--	--	0.5 U	0.538 U	--	0.55 U	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	0.255 U	0.29 U	0.55 U	1 J	0.56	0.75	0.83	0.44 J	0.75	0.38 J	0.25 U	0.25 U	0.51	0.375 U
4-NITROTOLUENE	0.255 UJ	0.29 U	0.55 U	0.255 UJ	0.27 U	0.25 U	0.269 U	0.269 U	0.28 U	0.26 U	0.25 U	0.25 U	0.24 U	0.375 U
DNX	0.255 U	--	--	0.63 J	--	0.25 U	0.269 U	--	0.28 U	--	--	--	--	--
HMX	0.255 U	0.29 U	7.8	21	8.6	8.2	7.8	6.4	8.8	7.1	8	9.1	6.4	0.375 U
MNX	0.255 U	--	--	4.1	--	1.2	1.2	--	2.5	--	--	--	--	--
NITROBENZENE	0.255 U	0.29 U	0.55 U	0.255 U	0.27 U	0.25 U	0.269 U	0.269 U	0.28 U	0.26 U	0.25 U	0.25 U	0.24 U	0.375 U
PICRAMIC ACID	--	--	0.39 U	--	--	--	--	--	--	--	--	--	--	0.39 U
PICRIC ACID	--	--	0.39 U	--	--	--	--	--	--	--	--	--	--	0.39 U
RDX	0.255 U	0.29 U	77	200	70	68	74	59	130	120	130	150	140	0.355 U
TETRYL	0.255 U	0.29 UJ	0.55 U	0.255 U	0.27 U	0.25 U	0.269 U	0.269 U	0.28 U	0.26 U	0.25 U	0.25 U	0.24 U	0.375 U
TNX	0.255 U	--	--	0.255 U	--	0.25 U	0.269 U	--	0.28 U	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/L)														
1,1,1,2-TETRACHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,1-TRICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2,2-TETRACHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2-TRICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2,3-TRICHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DIBROMO-3-CHLOROPROPANE	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U
1,2-DIBROMOETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-DIOXANE	50 U	50 U	50 U	50 U	50 U	--	--	--	--	--	--	--	--	50 UJ
2-BUTANONE	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UR
2-HEXANONE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
3-CHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-METHYL-2-PENTANONE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ACETONE	0.5 UJ	0.5 UJ	0.5 UR	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR
ACETONITRILE	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--	--	--	20 UJ
ACROLEIN	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U	0.5 U	0.5 UR	0.5 UR
ACRYLONITRILE	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UR
BENZENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMODICHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMOFORM	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMOMETHANE	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 UJ	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CARBON DISULFIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CARBON TETRACHLORIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROBENZENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLORODIBROMOMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROPRENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CIS-1,3-DICHLOROPROPENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
DIBROMOMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
DICHLORODIFLUOROMETHANE	0.3 UJ	0.3 UJ	0.3 U	0.3 UJ	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
ETHANE	--	--	--	0.013	--	0.0088 J	0.005 UJ	--	0.004 J	--	0.005 J	0.004 J	--	--
ETHENE	--	--	--	0.027	--	0.014 J	0.005 UJ	--	0.016 J	--	0.015 J	0.016 J	--	--
ETHYL METHACRYLATE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
ISOBUTANOL	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--	--	--	20 UJ
METHACRYLONITRILE	0.3 U	0.3 U	0.3 UR	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	3 U	0.3 UR
METHANE	--	--	--	0.93	--	9.2 J	1.5 J	--	0.25	--	1.9 J	5.4 J	--	--
METHYL IODIDE	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL METHACRYLATE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--
METHYLENE CHLORIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U
PROPIONITRILE	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--	--	--	20 UJ
STYRENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TETRACHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TOLUENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TOTAL XYLENES	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,2-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,3-DICHLOROPROPENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,4-DICHLORO-2-BUTENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	0.7 J	0.3 U	2.2	3.9	2.1	5	5	2.4	3.7	1.8	1.4	1.9	0.87 J	0.3 U
TRICHLOROFLUOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
VINYL ACETATE	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VINYL CHLORIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U

TABLE A.2-3
GROUNDWATER SAMPLE ANALYTICAL RESULTS FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNDS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION	**16MWT05**	**16MWT05**	**16MWT05**	**16MWT06**	**16MWT06**	**16MWT06**	**16MWT06**	**16MWT06**	**16MWT06**	**16MWT06**	**16MWT06**	**16MWT06**	**16MWT08**	**16MWT08**
SAMPLE ID	**16GWT0501-D**	**16GWT0502**	**16GWT0503**	**16GWT0601**	**16GWT0603**	**16GWT0604**	**16GWT0605**	**16GWT0606**	**16GWT0607**	**16GWT0608**	**16GWT0609**	**16GWT0610**	**16GWT0801**	**16GWT0802**
SAMPLE DATE	**20030424**	**20031122**	**20040826**	**20030428**	**20031108**	**20040824**	**20050205**	**20050507**	**20050812**	**20060108**	**20060508**	**20070426**	**20031206**	**20041030**
ROUND	**01**	**02**	**03**	**01**	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**02**	**03**
EVENT	**PMZ**	**PMZ**	**PMZ**	**PUZ**	**PUZ**	**PUZ**	**PUZ**	**PUZ**	**PUZ**	**PUZ**	**PUZ**	**PUZ**	**PLZMGD**	**PLZMGD**
SAMPLE CODE	**DUP**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**
EXPLOSIVES (UG/L)														
1,3,5-TRINITROBENZENE	0.135 U	0.263 U	0.28 U	0.34 U	0.25 UJ	1.8	2	3.4	1.9	2.3	7.4	9.6 J	0.26 U	0.358 U
1,3-DINITROBENZENE	0.135 U	0.263 U	0.28 U	0.34 U	0.25 U	0.25 U	0.24 U	0.264 UJ	0.28 U	0.25 U	0.25 U	0.24 UJ	0.26 U	0.358 U
2,2',6,6'-TETRANITRO-4,4'-AZOXYTOLUENE	--	0.526 U	--	--	0.5 U	--	--	--	--	--	--	--	0.521 U	--
2,4,6-TRINITROTOLUENE	0.135 U	0.263 U	0.28 U	0.34 U	0.25 UJ	4.8	6.2	12	4.1	6.1	21	33 J	0.26 U	0.358 U
2,4-DIAMINO-6-NITROTOLUENE	--	0.263 U	--	--	0.27 J	--	0.31 J	--	1.3	--	--	--	0.26 U	--
2,4-DINITROTOLUENE	0.135 U	0.263 U	0.28 U	0.34 U	0.25 UJ	0.8	1.2	1 J	0.68	1.1	3.3	4.6 J	0.26 U	0.358 U
2,6-DIAMINO-4-NITROTOLUENE	--	0.263 U	--	--	0.25 U	--	0.24 U	--	0.28 U	--	--	--	0.26 U	--
2,6-DINITROTOLUENE	0.135 U	0.263 U	0.28 U	0.34 U	0.25 UJ	0.25 U	0.92 J	1.3 J	0.52 J	0.25 U	2.3 J	2.5 J	0.26 U	0.358 U
2-AMINO-4,6-DINITROTOLUENE	0.135 U	0.263 U	0.28 U	0.34 U	4.2 J	29 J	34	60 J	28 J	38	130 J	150 J	0.26 U	0.358 U
2-NITROTOLUENE	0.135 U	0.263 U	0.28 U	0.34 U	0.25 UJ	0.25 U	0.24 U	0.264 UJ	0.28 U	0.25 U	0.25 U	0.24 UJ	0.26 U	0.358 U
3,5-DINITROANILINE	--	0.263 UJ	--	--	0.25 U	--	0.24 U	--	0.28 U	--	--	--	0.26 U	--
3-NITROTOLUENE	0.135 U	0.263 U	0.28 U	0.34 U	0.25 UJ	0.25 U	0.24 U	0.264 UJ	0.28 U	0.47 J	1.25 U	2.9 J	0.26 U	0.358 U
4,4'-TN-AZOXY	--	--	--	--	--	--	0.48 U	--	0.56 U	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	0.135 U	0.263 U	0.28 U	0.34 U	1.5	14	18	31	13	15	43	70 J	0.26 U	0.358 U
4-NITROTOLUENE	0.135 U	0.263 U	0.28 U	0.34 U	0.25 UJ	0.25 U	0.24 U	0.264 UJ	0.28 U	0.25 U	0.25 U	0.24 UJ	0.26 U	0.358 U
DNX	--	0.263 U	--	--	0.25 U	--	0.24 U	--	0.28 U	--	--	--	0.26 U	--
HMX	0.135 U	0.263 U	0.28 U	0.34 U	0.27 J	0.93 J	0.72 J	0.64 J	1.6	1 J	2.5	2.8 J	0.26 U	0.358 U
MNX	--	0.263 U	--	--	0.25 U	--	0.24 U	--	0.33 J	--	--	--	0.26 U	--
NITROBENZENE	0.135 U	0.263 U	0.28 U	0.34 U	0.25 U	0.25 U	0.24 U	0.264 UJ	0.28 U	0.25 U	0.25 U	0.24 UJ	0.26 U	0.358 U
PICRAMIC ACID	0.39 U	--	--	0.39 U	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	0.39 U	--	--	0.39 U	--	--	--	--	--	--	--	--	--	--
RDX	0.13 U	0.263 U	0.28 U	4	1.8	8.8	7.3	11	13	4.6	18	18 J	0.26 U	0.358 U
TETRYL	0.135 U	0.263 U	0.28 UJ	0.34 U	0.25 U	0.25 UJ	0.24 U	0.264 UJ	0.28 U	0.25 U	0.25 U	0.24 UJ	0.26 U	0.358 U
TNX	--	0.263 U	--	--	0.25 U	--	0.24 U	--	0.28 U	--	--	--	0.26 U	--
VOLATILE ORGANIC COMPOUNDS (UG/L)														
1,1,1,2-TETRACHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 J	120 U	1 U	15 U	0.99 J	0.3 U	--
1,1,1-TRICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	120 U	1 U	15 U	0.3 U	0.3 U	--
1,1,2,2-TETRACHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 UJ	1.6 J	2.1	3.9	5.5	120 U	1.6	15 U	6.5	0.3 U	--
1,1,2-TRICHLOROETHANE	0.3 U	0.3 U	0.3 U	38 J	220 J	190	250	250	120 U	200	120	360 J	0.3 U	--
1,1-DICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	120 U	1 U	15 U	0.3 U	0.3 U	--
1,1-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	26 J	120	160	140	160 J	120 U	150	94	310 J	0.3 U	--
1,2,3-TRICHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 UJ	0.6 J	0.3 U	0.3 U	120 U	1 U	15 U	1.1	0.3 U	--
1,2-DIBROMO-3-CHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 UJ	0.3 U	0.3 U	0.3 U	120 U	1 U	15 U	0.3 U	0.3 U	--
1,2-DIBROMOETHANE	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	120 U	1 U	15 U	0.3 U	0.3 U	--
1,2-DICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	2.3	0.3 U	0.3 U	120 U	2.4	15 U	0.3 U	0.3 U	--
1,2-DICHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	120 U	1 U	15 U	0.3 U	0.3 U	--
1,4-DIOXANE	50 UJ	50 U	50 U	50 UJ	50 U	50 U	--	--	--	--	--	--	50 U	--
2-BUTANONE	0.5 UR	0.5 UR	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	200 U	5 U	25 U	0.5 U	0.5 U	--
2-HEXANONE	0.5 U	0.5 UJ	0.5 U	0.5 UJ	16 J	1.4 J	1.8 J	0.5 U	200 U	5 U	25 U	0.5 U	0.5 U	--
3-CHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	200 U	5 U	25 U	0.5 U	0.5 U	--
4-METHYL-2-PENTANONE	0.5 U	0.5 U	0.5 U	3.5 J	7.1	27	36	41	200 U	25	25 U	33	0.5 U	--
ACETONE	0.5 UR	0.5 UR	0.5 UJ	10 U	18 J	12 U	33	17 J	200 UJ	16 J	25 U	33	3.7 J	--
ACETONITRILE	20 UJ	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--	20 U	--
ACROLEIN	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	200 UR	5 UR	25 U	0.5 UR	0.5 UR	--
ACRYLONITRILE	0.5 UR	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	200 U	5 U	25 U	0.5 U	0.5 U	--
BENZENE	0.3 U	0.3 U	0.3 U	0.9 J	3.3	3.5	4.6	4.7	120 U	1 U	15 U	4.3	0.3 U	--
BROMODICHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.8 J	0.3 U	0.3 U	0.3 U	0.3 U	120 U	1 U	15 U	0.3 U	0.3 U	--
BROMOFORM	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	120 U	1 U	15 U	0.3 U	0.3 U	--
BROMOMETHANE	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 UJ	0.3 U	0.3 U	0.3 U	120 U	1 U	15 U	0.3 U	0.3 U	--
CARBON DISULFIDE	0.3 U	0.3 U	0.3 U	0.8 J	4.3	3.04	2.5	2.6	120 U	4	15 U	2.5	0.3 U	--
CARBON TETRACHLORIDE	0.3 U	0.3 U	0.3 U	0.3 UJ	0.8 J	0.3 U	0.3 U	3.5	120 U	1 U	15 U	3.4	0.3 U	--
CHLOROBENZENE	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	120 U	1 U	15 U	0.3 U	0.3 U	--
CHLORODIBROMOMETHANE	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	120 U	1 U	15 U	0.3 U	0.3 U	--
CHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	200 U	1 U	25 U	0.5 U	0.5 U	--
CHLOROFORM	0.3 U	0.3 U	0.3 U	12 J	10	15	20	21	120 U	14	15 U	21	15	--
CHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	120 U	1 U	15 U	0.3 U	0.3 U	--
CHLOROPRENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	200 U	5 U	25 U	0.5 U	0.5 U	--
CIS-1,2-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	600	4200	4100	5200	5600	4600	4800	3100	10000	0.3 U	--
CIS-1,3-DICHLOROPROPENE	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	120 U	1 U	15 U	0.3 U	0.3 U	--
DIBROMOMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	120 U	1 U	15 U	0.3 U	0.3 U	--
DICHLORODIFLUOROMETHANE	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	120 UJ	1 UJ	15 U	0.3 U	0.3 U	--
ETHANE	--	--	--	--	7.7	--	2.3	--	1.5	--	1	--	--	--
ETHENE	--	--	--	--	65	--	29	--	22	--	22	--	--	--
ETHYL METHACRYLATE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	200 U	5 U	25 U	0.5 U	0.5 U	--
ETHYLBENZENE	0.3 U	0.3 U	0.3 U	0.3 UJ	2.6	3.9	4.4	6.2	120 U	4.2	15 U	7.2	0.3 U	--
ISOBUTANOL	20 UJ	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--	20 U	--
METHACRYLONITRILE	0.3 UR	0.3 UR	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	120 U	50 U	15 U	3 U	0.3 U	--
METHANE	--	--	--	--	280	--	440	--	260	--	190	--	--	--
METHYL IODIDE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	200 U	5 U	25 U	0.5 U	0.5 U	--
METHYL METHACRYLATE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	200 U	5 U	25 U	0.5 U	0.5 U	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	200 U	1 U	25 U	0.5 U	--	--
METHYLENE CHLORIDE	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 UJ	120 U	2 UJ	15 U	0.3 U	0.6 J	--
PROPIONITRILE	20 UJ	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--	20 U	--
STYRENE	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	120 U	1 U	15 U	0.3 U	0.3 U	--
TETRACHLOROETHENE	0.3 U	0.3 U	0.3 U	13 J	160	150	190	180 J	120 U	180	100	330 J	0.3 U	--
TOLUENE	0.3 U	0.3 U	0.3 U	32 J	270 J	310 J	310	380	290 J	270	200	690	0.3 U	--
TOTAL XYLENES	0.3 U	0.3 U	0.3 U	0.3 UJ	3.5	6.5	6.7	9.1	120 U	6.6	15 U	12	0.3 U	--
TRANS-1,2-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	3.1 J	22	20	21	25	120 U	19	15 U	26	0.3 U	--
TRANS-1,3-DICHLOROPROPENE	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	120 U	1 U	15 U	0.3 U	0.3 U	--
TRANS-1,4-DICHLORO-2-BUTENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	200 U	5 U	25 U	0.5 U	0.5 U	--
TRICHLOROETHENE	0.3 U	0.3 U	0.3 U	35000	250000	330000	440000	510000	480000	370000	150000	740000	0.3 U	--
TRICHLOROFLUOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	120 U	1 U	15 U	0.3 U	0.3 U	--
VINYL ACETATE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	200 U	5 U	25 U	0.5 U	0.5 U	--
VINYL CHLORIDE	0.3 U	0.3 U	0.3 U	65 J	340 J	390 J	660	610	350 J	450	360	1100	0.3 U	--

TABLE A.2-3
GROUNDWATER SAMPLE ANALYTICAL RESULTS FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNDS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION	16MWT09	16MWT09	16MWT09	16MWT09	16MWT09	16MWT09	16MWT09	16MWT09	16MWT09	16MWT10	16MWT10	16MWT10	16MWT10	16MWT10
SAMPLE ID	16GWT0901	16GWT0902	16GWT0903	16GWT0904-D	16GWT0904	16GWT0905	16GWT0906	16GWT0907	16GWT0908	16GWT1001	16GWT1002	16GWT1002-D	16GWT1003	16GWT1004
SAMPLE DATE	20031122	20040817	20050206	20050507	20050507	20050814	20060107	20060504	20070424	20031121	20040817	20040817	20050206	20050507
ROUND	02	03	04	05	05	06	07	08	09	02	03	03	04	05
EVENT	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ
SAMPLE CODE	NORMAL	NORMAL	NORMAL	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	NORMAL	NORMAL
EXPLOSIVES (UG/L)														
1,3,5-TRINITROBENZENE	0.272 U	0.27 U	0.24 U	0.258 U	0.269 U	0.26 U	0.25 U	0.25 U	0.24 UJ	0.287 U	0.27 U	0.27 U	0.255 U	0.248 U
1,3-DINITROBENZENE	0.272 U	0.27 U	0.24 U	0.258 U	0.269 U	0.26 U	0.25 U	0.25 U	0.24 UJ	0.287 U	0.27 U	0.27 U	0.255 U	0.248 U
2,2',6,6'-TETRANITRO-4,4'-AZOXYTOLUENE	0.543 U	--	--	--	--	--	--	--	--	0.575 U	--	--	--	--
2,4,6-TRINITROTOLUENE	0.272 U	0.27 U	0.24 U	0.258 U	0.269 U	0.26 U	0.25 U	0.25 U	0.24 UJ	0.287 U	0.27 U	0.27 U	0.255 U	0.248 U
2,4-DIAMINO-6-NITROTOLUENE	0.272 U	--	0.24 U	--	--	0.26 U	--	--	--	0.287 U	--	--	0.255 U	--
2,4-DINITROTOLUENE	0.272 U	0.27 U	0.24 U	0.258 U	0.269 U	0.26 U	0.25 U	0.25 U	0.24 UJ	0.287 U	0.27 U	0.27 U	0.255 U	0.248 U
2,6-DIAMINO-4-NITROTOLUENE	0.272 U	--	0.24 U	--	--	0.26 U	--	--	--	0.287 U	--	--	0.255 U	--
2,6-DINITROTOLUENE	0.272 U	0.27 U	0.24 U	0.258 U	0.269 U	0.26 U	0.25 U	0.25 U	0.24 UJ	0.287 U	0.27 U	0.27 U	0.255 U	0.248 U
2-AMINO-4,6-DINITROTOLUENE	0.31 J	0.27 U	0.26 J	0.258 U	0.269 U	0.27 J	0.25 J	0.25 U	0.4 J	0.287 U	0.27 U	0.27 U	0.255 U	0.248 U
2-NITROTOLUENE	0.272 U	0.27 U	0.24 U	0.258 U	0.269 U	0.26 U	0.25 U	0.25 U	0.24 UJ	0.287 U	0.27 U	0.27 U	0.255 U	0.248 U
3,5-DINITROANILINE	0.272 UJ	--	0.24 U	--	--	0.26 U	--	--	--	0.287 U	--	--	0.255 U	--
3-NITROTOLUENE	0.272 U	1.5 J	1.8 J	0.258 U	0.269 U	1.1 J	1.5 J	1.2 J	0.24 UJ	0.287 U	2.1 J	2.1 J	1.8 J	0.248 U
4,4'-TN-AZOXY	--	--	0.48 U	--	--	0.52 U	--	--	--	--	--	--	0.51 U	--
4-AMINO-2,6-DINITROTOLUENE	0.69 J	0.27 U	0.61 J	0.6 J	0.269 U	0.68	0.63	1.1	0.24 UJ	0.287 U	0.27 U	0.27 U	0.42 J	0.248 U
4-NITROTOLUENE	0.272 U	0.27 U	0.24 U	0.258 U	0.269 U	0.26 U	0.25 U	0.25 U	0.24 UJ	0.287 U	0.27 U	0.27 U	0.255 U	0.248 U
DNX	0.272 U	--	0.24 U	--	--	0.26 U	--	--	--	0.287 U	--	--	0.255 U	--
HMX	11	8.1	9.3	8.9	9.3	11	12 J	9.9	8.3 J	6.7	5.2	5	5.1	4.8
MNX	1.1	--	0.43 J	--	--	0.46 J	--	--	--	0.5 J	--	--	0.3 J	--
NITROBENZENE	0.272 U	0.27 U	0.24 U	0.258 U	0.269 U	0.26 U	0.25 U	0.25 U	0.24 UJ	0.287 U	0.27 U	0.27 U	0.255 U	0.248 U
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	110	79	92	95	98	100	110	100	85 J	55	55	49	50	51
TETRYL	0.272 U	0.27 U	0.24 U	0.258 U	0.269 U	0.26 U	0.25 U	0.25 U	0.24 UJ	0.287 U	0.27 U	0.27 U	0.255 U	0.248 U
TNX	0.272 U	--	0.24 U	--	--	0.26 U	--	--	--	0.287 U	--	--	0.255 U	--
VOLATILE ORGANIC COMPOUNDS (UG/L)														
1,1,1,2-TETRACHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,1-TRICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2,2-TETRACHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2-TRICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2,3-TRICHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DIBROMO-3-CHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DIBROMOETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-DIOXANE	50 U	50 U	--	--	--	--	--	--	--	50 U	50 U	50 U	--	--
2-BUTANONE	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 U
2-HEXANONE	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
3-CHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-METHYL-2-PENTANONE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ACETONE	0.5 UR	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	5 UJ	0.5 U	0.5 U	0.5 UR	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ
ACETONITRILE	20 U	20 U	--	--	--	--	--	--	--	20 U	20 U	20 U	--	--
ACROLEIN	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	5 UR	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR
ACRYLONITRILE	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 U
BENZENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMODICHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMOFORM	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMOMETHANE	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U
CARBON DISULFIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CARBON TETRACHLORIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	2.4	0.3 U
CHLOROBENZENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLORODIBROMOMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROETHANE	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U
CHLOROFORM	0.9 J	0.8 J	0.6 J	0.6 U	0.6 U	0.8 J	1 U	0.6 J	0.74 J	3.4	2.6	2.5	2.4	2.2 U
CHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROPRENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.2 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.2 J	0.3 U	0.3 U	0.3 U	0.3 U
CIS-1,3-DICHLOROPROPENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
DIBROMOMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
DICHLORODIFLUOROMETHANE	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 UJ	1 UJ	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 UJ	0.3 U	0.3 U
ETHANE	--	--	0.074	--	--	0.044	--	0.038	--	0.33	--	--	0.082	--
ETHENE	--	--	0.081	--	--	0.079	--	0.06	--	0.16	--	--	0.03	--
ETHYL METHACRYLATE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
ISOBUTANOL	20 U	20 U	--	--	--	--	--	--	--	20 U	20 U	20 U	--	--
METHACRYLONITRILE	0.3 UR	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	50 U	0.3 U	3 U	0.3 UR	0.3 U	0.3 U	0.3 U	0.3 U
METHANE	--	--	1.9	--	--	0.64	--	9.4	--	19	--	--	1	--
METHYL IODIDE	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
METHYL METHACRYLATE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL TERT-BUTYL ETHER	--	--	--	--	--	0.5 U	1 U	0.5 U	0.5 U	--	--	--	--	--
METHYLENE CHLORIDE	0.3 UJ	0.3 UJ	0.3 U	0.3 UJ	0.3 UJ	0.3 U	2 UJ	0.3 U	0.3 U	0.3 UJ	0.3 UJ	0.3 UJ	0.3 U	0.3 UJ
PROPIONITRILE	20 U	20 U	--	--	--	--	--	--	--	20 U	20 U	20 U	--	--
STYRENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TETRACHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TOLUENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TOTAL XYLENES	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,2-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,3-DICHLOROPROPENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,4-DICHLORO-2-BUTENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	7.6	7.1	10	7.2	6.9	9.1	8.7	6.3	4.9	1.9	1.9	1.9	2.4	1.6
TRICHLOROFLUOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
VINYL ACETATE	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U
VINYL CHLORIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U

TABLE A.2-3
GROUNDWATER SAMPLE ANALYTICAL RESULTS FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNDS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION	16MWT10	16MWT10	16MWT10	16MWT10	16MWT11	16MWT11	16MWT11	16MWT11	16MWT11	16MWT11	16MWT11	16MWT11	16MWT12	16MWT12
SAMPLE ID	16GWT1005	16GWT1006	16GWT1007	16GWT1008	16GWT1101	16GWT1102	16GWT1103	16GWT1104	16GWT1105	16GWT1106	16GWT1107	16GWT1108	16GWT1201	16GWT1201-D
SAMPLE DATE	20050813	20060109	20060505	20070424	20031206	20040825	20050204	20050506	20050812	20060122	20060521	20070428	20031121	20031121
ROUND	06	07	08	09	02	03	04	05	06	07	08	09	02	02
EVENT	PUZ	PUZ	PUZ	PUZ	PLZMGD	PLZMGD	PLZMGD	PLZMGD	PLZMGD	PLZMGD	PLZMGD	PLZMGD	PMZ	PMZ
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
EXPLOSIVES (UG/L)														
1,3,5-TRINITROBENZENE	0.27 U	0.24 U	0.25 U	0.24 UJ	0.248 UJ	0.242 U	0.316 U	0.266 U	0.29 U	0.26 U	0.25 UJ	0.24 UJ	0.269 U	0.278 U
1,3-DINITROBENZENE	0.27 U	0.24 U	0.25 U	0.24 UJ	0.248 UJ	0.242 U	0.316 U	0.266 U	0.29 U	0.26 U	0.25 UJ	0.24 UJ	0.269 U	0.278 U
2,2',6,6'-TETRANITRO-4,4'-AZOXYTOLUENE	--	--	--	--	0.495 UJ	--	--	--	--	--	--	--	0.538 U	0.556 U
2,4,6-TRINITROTOLUENE	0.27 U	0.24 U	0.25 U	0.24 UJ	0.248 UJ	0.242 U	0.316 U	0.266 U	0.29 U	0.26 U	0.25 UJ	0.24 UJ	0.269 U	0.278 U
2,4-DIAMINO-6-NITROTOLUENE	0.27 U	--	--	--	0.248 UJ	--	0.316 U	--	0.29 U	--	--	--	0.269 U	0.278 U
2,4-DINITROTOLUENE	0.27 U	0.24 U	0.25 U	0.24 UJ	0.248 UJ	0.242 U	0.316 U	0.266 U	0.29 U	0.26 U	0.25 UJ	0.24 UJ	0.269 U	0.278 U
2,6-DIAMINO-4-NITROTOLUENE	0.27 U	--	--	--	0.248 UJ	--	0.316 U	--	0.29 U	--	--	--	0.269 U	0.278 U
2,6-DINITROTOLUENE	0.27 U	0.24 U	0.25 U	0.24 UJ	0.248 UJ	0.242 U	0.316 U	0.266 U	0.29 U	0.26 U	0.25 UJ	0.24 UJ	0.269 U	0.278 U
2-AMINO-4,6-DINITROTOLUENE	0.27 U	0.24 U	0.25 U	0.24 UJ	0.248 UJ	0.242 U	0.316 U	0.266 U	0.29 U	0.26 U	0.25 UJ	0.24 UJ	0.269 U	0.278 U
2-NITROTOLUENE	0.27 U	0.24 U	0.25 U	0.24 UJ	0.248 UJ	0.242 U	0.316 U	0.266 U	0.29 U	0.26 U	0.25 UJ	0.24 UJ	0.269 U	0.278 U
3,5-DINITROANILINE	0.27 U	--	--	--	0.248 UJ	--	0.316 U	--	0.29 U	--	--	--	0.269 U	0.278 U
3-NITROTOLUENE	0.34 J	0.24 U	0.25 U	0.24 UJ	0.248 UJ	0.242 U	0.316 U	0.266 U	0.29 U	0.26 U	0.25 UJ	0.24 UJ	0.269 U	0.278 U
4,4'-TN-AZOXY	0.54 U	--	--	--	--	--	0.632 U	--	0.59 U	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	0.47 J	0.5 J	0.25 U	0.24 UJ	0.248 UJ	0.242 U	0.316 U	0.266 U	0.29 U	0.26 U	0.25 UJ	0.24 UJ	0.269 U	0.278 U
4-NITROTOLUENE	0.27 U	0.24 U	0.25 U	0.24 UJ	0.248 UJ	0.242 U	0.316 U	0.266 U	0.29 U	0.26 U	0.25 UJ	0.24 UJ	0.269 U	0.278 U
DNX	0.27 U	--	--	--	0.248 UJ	--	0.316 U	--	0.29 U	--	--	--	0.269 U	0.278 U
HMX	5.8	5.3 J	4.5	5 J	0.248 UJ	0.242 U	0.316 U	0.266 U	0.29 U	0.26 U	0.25 UJ	0.32 J	1.3 J	0.278 UJ
MNX	0.27 U	--	--	--	0.248 UJ	--	0.316 U	--	0.29 U	--	--	--	0.269 U	0.278 U
NITROBENZENE	0.27 U	0.24 U	0.25 U	0.24 UJ	0.248 UJ	0.242 U	0.316 U	0.266 U	0.29 U	0.26 U	0.25 UJ	0.24 UJ	0.269 U	0.278 U
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	58	52	47	53 J	0.248 UJ	0.242 U	0.316 U	0.266 U	0.29 U	0.26 U	0.25 UJ	0.24 UJ	0.269 U	0.278 U
TETRYL	0.27 U	0.24 U	0.25 U	0.24 UJ	0.248 UJ	0.242 UJ	0.316 U	0.266 U	0.29 U	0.26 U	0.25 UJ	0.24 UJ	0.269 U	0.278 U
TNX	0.27 U	--	--	--	0.248 UJ	--	0.316 U	--	0.29 U	--	--	--	0.269 U	0.278 U
VOLATILE ORGANIC COMPOUNDS (UG/L)														
1,1,1,2-TETRACHLOROETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,1-TRICHLOROETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2,2-TETRACHLOROETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2-TRICHLOROETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2,3-TRICHLOROPROPANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DIBROMO-3-CHLOROPROPANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DIBROMOETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROPROPANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-DIOXANE	--	--	--	--	50 U	50 U	--	--	--	--	--	--	50 U	50 U
2-BUTANONE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR
2-HEXANONE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ
3-CHLOROPROPENE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-METHYL-2-PENTANONE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ACETONE	0.5 U	5 UJ	0.5 U	0.5 U	0.8 J	0.5 UJ	0.5 UJ	50 UJ	0.5 U	1.3 J	0.5 U	0.5 U	0.5 UR	0.5 UR
ACETONITRILE	--	--	--	--	20 U	20 U	--	--	--	--	--	--	20 U	20 U
ACROLEIN	0.5 UR	5 UR	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	50 UR	0.5 UR	0.5 UR	0.5 U	0.5 UR	0.5 UR	0.5 UR
ACRYLONITRILE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR
BENZENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMODICHLOROMETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMOFORM	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMOMETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CARBON DISULFIDE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CARBON TETRACHLORIDE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROBENZENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLORODIBROMOMETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROETHANE	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	2.3	2.4	1.8	1.8	16	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROMETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROPRENE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CIS-1,3-DICHLOROPROPENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
DIBROMOMETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
DICHLORODIFLUOROMETHANE	0.3 UJ	1 UJ	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	30 U	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U
ETHANE	0.054	--	0.058	--	--	--	0.34	--	0.44	--	1.2	--	0.37 J	0.13 J
ETHENE	0.036	--	0.11	--	--	--	0.075	--	0.074	--	0.06	--	0.031 J	0.075 J
ETHYL METHACRYLATE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
ISOBUTANOL	--	--	--	--	20 U	20 U	--	--	--	--	--	--	20 U	20 U
METHACRYLONITRILE	0.3 U	50 U	0.3 U	3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	3 U	0.3 UR	0.3 UR
METHANE	0.62	--	4.5	--	--	--	540	--	1700	--	5100	--	11	10
METHYL IODIDE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ
METHYL METHACRYLATE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL TERT-BUTYL ETHER	0.5 U	1 U	0.5 U	0.5 U	--	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
METHYLENE CHLORIDE	0.3 U	2 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 UJ	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 UJ
PROPIONITRILE	--	--	--	--	20 U	20 U	--	--	--	--	--	--	20 U	20 U
STYRENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TETRACHLOROETHENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TOLUENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TOTAL XYLENES	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,2-DICHLOROETHENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,3-DICHLOROPROPENE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,4-DICHLORO-2-BUTENE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	1.4	2	1.5	1.4	0.3 U	0.3 U	0.3 U	52 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRICHLOROFLUOROMETHANE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
VINYL ACETATE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VINYL CHLORIDE	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U

LOCATION	**16MWT12**	**16MWT12**	**16MWT12**	**16MWT12**	**16MWT12**	**16MWT12**	**16MWT12**	**16MWT13**	**16MWT13**	**16MWT13**	**16MWT13**	**16MWT13**	**16MWT13**	**16MWT13**
SAMPLE ID	**16GWT1202**	**16GWT1203**	**16GWT1204**	**16GWT1205**	**16GWT1206**	**16GWT1207**	**16GWT1208**	**16GWT1301**	**16GWT1302**	**16GWT1303**	**16GWT1304**	**16GWT1305**	**16GWT1306**	**16GWT1307**
SAMPLE DATE	**20040824**	**20050206**	**20050507**	**20050813**	**20060107**	**20060506**	**20070426**	**20031122**	**20040818**	**20050205**	**20050508**	**20050814**	**20060122**	**20060505**
ROUND	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**02**	**03**	**04**	**05**	**06**	**07**	**08**
EVENT	**PMZ**	**PMZ**	**PMZ**	**PMZ**	**PMZ**	**PMZ**	**PMZ**	**PUZ**	**PUZ**	**PUZ**	**PUZ**	**PUZ**	**PUZ**	**PUZ**
SAMPLE CODE	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**	**NORMAL**
EXPLOSIVES (UG/L)														
1,3,5-TRINITROBENZENE	0.264 U	0.26 U	0.266 U	0.26 U	0.25 U	0.25 U	0.24 U	0.275 U	0.271 U	0.264 U	0.298 U	0.29 U	0.25 U	0.25 U
1,3-DINITROBENZENE	0.264 U	0.26 U	0.266 U	0.26 U	0.25 U	0.25 U	0.24 U	0.275 U	0.271 U	0.264 U	0.298 U	0.29 U	0.25 U	0.25 U
2,2',6,6'-TETRANITRO-4,4'-AZOXYTOLUENE	--	--	--	--	--	--	--	0.549 U	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	0.264 U	0.26 U	0.266 U	0.26 U	0.25 U	0.25 U	0.24 U	0.275 U	0.271 U	0.264 U	0.298 U	0.29 U	0.25 U	0.25 U
2,4-DIAMINO-6-NITROTOLUENE	--	0.26 U	--	0.26 U	--	--	--	0.275 U	--	0.264 U	--	0.29 U	--	--
2,4-DINITROTOLUENE	0.264 U	0.26 U	0.266 U	0.26 U	0.25 U	0.25 U	0.24 U	0.275 U	0.271 U	0.264 U	0.298 U	0.29 U	0.25 U	0.25 U
2,6-DIAMINO-4-NITROTOLUENE	--	0.26 U	--	0.26 U	--	--	--	0.275 U	--	0.264 U	--	0.29 U	--	--
2,6-DINITROTOLUENE	0.264 U	0.26 U	0.266 U	0.26 U	0.25 U	0.25 U	0.24 U	0.275 U	0.271 U	0.264 U	0.298 U	0.29 U	0.25 U	0.25 U
2-AMINO-4,6-DINITROTOLUENE	0.264 U	0.26 U	0.266 U	0.26 U	0.25 U	0.25 U	0.24 U	0.275 U	0.271 U	0.264 U	0.298 U	0.29 U	0.25 U	0.25 U
2-NITROTOLUENE	0.264 U	0.26 U	0.266 U	0.26 U	0.25 U	0.25 U	0.24 U	0.275 U	0.271 U	0.264 U	0.298 U	0.29 U	0.25 U	0.25 U
3,5-DINITROANILINE	--	0.26 U	--	0.26 U	--	--	--	0.275 U	--	0.264 U	--	0.29 U	--	--
3-NITROTOLUENE	0.264 U	0.26 U	0.266 U	0.26 U	0.25 U	0.25 U	0.24 U	0.275 U	0.271 U	0.264 U	0.298 U	0.29 U	0.25 U	0.25 U
4,4'-TN-AZOXY	--	0.52 U	--	0.51 U	--	--	--	--	--	0.528 U	--	0.59 U	--	--
4-AMINO-2,6-DINITROTOLUENE	0.264 U	0.26 U	0.266 U	0.26 U	0.25 U	0.25 U	0.24 U	0.275 U	0.271 U	0.264 U	0.298 U	0.29 U	0.25 U	0.25 U
4-NITROTOLUENE	0.264 U	0.26 U	0.266 U	0.26 U	0.25 U	0.25 U	0.24 U	0.275 U	0.271 U	0.264 U	0.298 U	0.29 U	0.25 U	0.25 U
DNX	--	0.26 U	--	0.26 U	--	--	--	0.275 U	--	0.264 U	--	0.29 U	--	--
HMX	0.264 U	0.26 U	0.266 U	0.26 U	0.25 U	0.25 U	0.24 U	0.275 U	0.271 U	0.264 U	0.298 U	0.29 U	0.25 U	0.25 U
MNX	--	0.26 U	--	0.26 U	--	--	--	0.275 U	--	0.264 U	--	0.29 U	--	--
NITROBENZENE	0.264 U	0.26 U	0.266 U	0.26 U	0.25 U	0.25 U	0.24 U	0.275 U	0.271 U	0.264 U	0.298 U	0.29 U	0.25 U	0.25 U
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	0.264 U	0.26 U	0.266 U	0.26 U	0.25 U	0.25 U	0.24 U	6.7	1.1	0.264 U	0.298 U	0.29 U	0.42 J	0.25 U
TETRYL	0.264 UJ	0.26 U	0.266 U	0.26 U	0.25 U	0.25 U	0.24 U	0.275 U	0.271 U	0.264 U	0.298 U	0.29 U	0.25 U	0.25 U
TNX	--	0.26 U	--	0.26 U	--	--	--	0.275 U	--	0.264 U	--	0.29 U	--	--
VOLATILE ORGANIC COMPOUNDS (UG/L)														
1,1,1,2-TETRACHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
1,1,1-TRICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
1,1,2,2-TETRACHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
1,1,2-TRICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	81 J	39	2.1	3.2	0.3 U	4.9	0.3 U
1,1-DICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
1,1-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	4.4	0.3 U	0.5 J	0.3 U	0.6 U	0.3 U
1,2,3-TRICHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
1,2-DIBROMO-3-CHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
1,2-DIBROMOETHANE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
1,2-DICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.6 J	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
1,2-DICHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
1,4-DIOXANE	50 U	--	--	--	--	--	--	50 U	50 U	--	--	--	--	--
2-BUTANONE	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	50 UR	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
2-HEXANONE	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	50 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
3-CHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
4-METHYL-2-PENTANONE	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
ACETONE	0.5 UJ	0.5 U	0.5 UJ	0.5 U	5 UJ	0.5 U	0.5 U	50 UR	0.5 UJ	7.6	0.5 UJ	0.5 UJ	1 UJ	0.5 U
ACETONITRILE	20 U	--	--	--	--	--	--	20 U	20 U	--	--	--	--	--
ACROLEIN	0.5 UR	0.5 UR	0.5 UR	0.5 UR	5 UR	0.5 U	0.5 UR	50 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	1 UR	0.5 U
ACRYLONITRILE	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	50 UR	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
BENZENE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	1.1	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
BROMODICHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
BROMOFORM	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
BROMOMETHANE	0.3 U	0.3 UJ	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
CARBON DISULFIDE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
CARBON TETRACHLORIDE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
CHLOROBENZENE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
CHLORODIBROMOMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
CHLOROETHANE	0.5 U	0.5 UJ	0.5 U	0.5 U	1 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
CHLOROFORM	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	3.1	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
CHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.6 U	0.4 J
CHLOROPRENE	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	280	140	8.2	12	1.5	20	1.5
CIS-1,3-DICHLOROPROPENE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
DIBROMOMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
DICHLORODIFLUOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 UJ	1 UJ	0.3 U	0.3 UJ	30 U	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.6 U	0.3 U
ETHANE	--	0.17	--	0.13	--	0.15	--	0.45	--	0.065	--	0.03	--	0.07
ETHENE	--	0.12	--	0.028	--	0.066	--	0.67	--	0.035	--	0.1	--	0.11
ETHYL METHACRYLATE	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
ETHYLBENZENE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	1.6	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
ISOBUTANOL	20 U	--	--	--	--	--	--	20 U	20 U	--	--	--	--	--
METHACRYLONITRILE	0.3 U	0.3 U	0.3 U	0.3 U	50 U	0.3 U	3 U	30 UR	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
METHANE	--	1.6	--	0.88	--	2.9	--	0.032	--	84	--	170	--	190
METHYL IODIDE	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	50 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
METHYL METHACRYLATE	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
METHYL TERT-BUTYL ETHER	--	--	--	0.5 U	1 U	0.5 U	0.5 U	--	--	--	--	0.5 U	1 U	0.5 U
METHYLENE CHLORIDE	0.3 UJ	0.3 U	0.3 UJ	0.3 U	2 UJ	0.3 U	0.3 U	59 J	0.3 UJ	0.3 U	0.3 UJ	0.3 U	0.6 UJ	0.3 U
PROPIONITRILE	20 U	--	--	--	--	--	--	20 U	20 U	--	--	--	--	--
STYRENE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
TETRACHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	7.2	0.3 U	0.6 J	0.3 U	0.6 U	0.3 U
TOLUENE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	2.8	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
TOTAL XYLENES	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	2.8	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
TRANS-1,2-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	1.9	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
TRANS-1,3-DICHLOROPROPENE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
TRANS-1,4-DICHLORO-2-BUTENE	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
TRICHLOROETHENE	0.3 U	0.5 J	0.3 U	0.3 U	1 U	0.3 U	0.3 U	62000	28000	1900	2200	130	5100	160
TRICHLOROFLUOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
VINYL ACETATE	0.5 U	0.5 UJ	0.5 U	0.5 U	5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 UJ	0.5 U	0.5 U	1 U	0.5 U
VINYL CHLORIDE	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U	30 U	0.8 J	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U

LOCATION	16MWT13	16MWT15	16MWT15	16MWT15	16MWT15	16MWT15	16MWT15	16MWT15	16MWT15	16MWT16	16MWT16	16MWT17	16MWT17	16MWT17
SAMPLE ID	16GWT1308	16GWT1501	16GWT1502	16GWT1503	16GWT1504	16GWT1505	16GWT1506	16GWT1507	16GWT1508	16GWT1601	16GWT1602	16GWT1701	16GWT1702	16GWT1703
SAMPLE DATE	20070417	20031206	20040817	20050205	20050507	20050814	20060121	20060508	20070417	20031122	20040827	20031205	20040825	20050205
ROUND	09	02	03	04	05	06	07	08	09	02	03	02	03	04
EVENT	PUZ	PLZMGD	PLZMGD	PLZMGD	PLZMGD	PLZMGD	PLZMGD	PLZMGD	PLZMGD	PMZ	PMZ	PUZ	PUZ	PUZ
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
EXPLOSIVES (UG/L)														
1,3,5-TRINITROBENZENE	0.24 U	0.248 U	0.26 U	0.266 U	0.271 U	0.26 U	0.25 U	0.25 U	0.24 U	0.253 U	0.25 U	0.269 U	0.27 U	0.24 U
1,3-DINITROBENZENE	0.24 U	0.248 U	0.26 U	0.266 U	0.271 U	0.26 U	0.25 U	0.25 U	0.24 U	0.253 U	0.25 U	0.269 U	0.27 U	0.24 U
2,2',6,6'-TETRANITRO-4,4'-AZOXYTOLUENE	--	0.495 U	--	--	--	--	--	--	--	0.505 U	--	0.538 U	--	--
2,4,6-TRINITROTOLUENE	0.24 U	0.248 U	0.26 U	0.266 U	0.271 U	0.26 U	0.25 U	0.25 U	0.24 U	0.253 U	0.25 U	0.269 U	0.27 U	0.24 U
2,4-DIAMINO-6-NITROTOLUENE	--	0.248 U	--	0.266 U	--	0.26 U	--	--	--	0.253 U	--	0.269 U	--	0.24 U
2,4-DINITROTOLUENE	0.24 U	0.248 U	0.26 U	0.266 U	0.271 U	0.26 U	0.25 U	0.25 U	0.24 U	0.253 U	0.25 U	0.269 U	0.27 U	0.24 U
2,6-DIAMINO-4-NITROTOLUENE	--	0.248 U	--	0.266 U	--	0.26 U	--	--	--	0.253 U	--	0.269 U	--	0.24 U
2,6-DINITROTOLUENE	0.24 U	0.248 U	0.26 U	0.266 U	0.271 U	0.26 U	0.25 U	0.25 U	0.24 U	0.253 U	0.25 U	0.269 U	0.27 U	0.24 U
2-AMINO-4,6-DINITROTOLUENE	0.24 U	0.248 U	0.26 U	0.266 U	0.271 U	0.26 U	0.25 U	0.25 U	0.24 U	0.253 U	0.25 U	0.269 U	0.27 U	0.24 U
2-NITROTOLUENE	0.24 U	0.248 U	0.26 U	0.266 U	0.271 U	0.26 U	0.25 U	0.25 U	0.24 U	0.253 U	1	0.269 U	0.27 U	0.24 U
3,5-DINITROANILINE	--	0.248 U	--	0.266 U	--	0.26 U	--	--	--	0.253 UJ	--	0.269 U	--	0.24 U
3-NITROTOLUENE	0.33 J	0.248 U	0.26 U	0.266 U	0.271 U	0.26 U	0.25 U	0.25 U	0.24 U	0.253 U	0.25 U	0.269 U	0.27 U	0.24 U
4,4'-TN-AZOXY	--	--	--	0.532 U	--	0.52 U	--	--	--	--	--	--	--	0.48 U
4-AMINO-2,6-DINITROTOLUENE	0.24 U	0.248 U	0.26 U	0.266 U	0.271 U	0.26 U	0.25 U	0.25 U	0.24 U	0.253 U	0.25 U	0.269 U	0.27 U	0.24 U
4-NITROTOLUENE	0.24 U	0.248 U	0.26 U	0.266 U	0.271 U	0.26 U	0.25 U	0.25 U	0.24 U	0.253 U	0.25 U	0.269 U	0.27 U	0.24 U
DNX	--	0.248 U	--	0.266 U	--	0.26 U	--	--	--	0.253 U	--	0.269 U	--	0.24 U
HMX	0.24 U	0.248 U	0.26 U	0.266 U	0.271 U	0.26 U	0.25 U	0.25 U	0.24 U	0.253 U	0.25 U	0.43 J	0.27 U	0.24 U
MNX	--	0.248 U	--	0.266 U	--	0.26 U	--	--	--	0.253 U	--	0.269 U	--	0.24 U
NITROBENZENE	0.24 U	0.248 U	0.26 U	0.266 U	0.271 U	0.26 U	0.25 U	0.25 U	0.24 U	0.253 U	0.25 U	0.269 U	0.27 U	0.24 U
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	0.24 U	0.248 U	0.26 U	0.266 U	0.271 U	0.26 U	0.25 U	0.25 U	0.24 U	0.253 U	0.25 U	4.3	5.2	4.9
TETRYL	0.24 U	0.248 U	0.26 U	0.266 U	0.271 U	0.26 U	0.25 U	0.25 U	0.24 U	0.253 U	0.25 UJ	0.269 U	0.27 UJ	0.24 U
TNX	--	0.248 U	--	0.266 U	--	0.26 U	--	--	--	0.253 U	--	0.269 U	--	0.24 U
VOLATILE ORGANIC COMPOUNDS (UG/L)														
1,1,1,2-TETRACHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
1,1,1-TRICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
1,1,2,2-TETRACHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
1,1,2-TRICHLOROETHANE	0.96 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	32	60 U	44
1,1-DICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
1,1-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	5.3	60 U	8.1
1,2,3-TRICHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
1,2-DIBROMO-3-CHLOROPROPANE	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
1,2-DIBROMOETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
1,2-DICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
1,2-DICHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
1,4-DIOXANE	--	50 U	50 U	--	--	--	--	--	--	50 U	50 U	50 U	50 U	--
2-BUTANONE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	100 U	0.5 U
2-HEXANONE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	100 U	0.5 U
3-CHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	100 U	0.5 U
4-METHYL-2-PENTANONE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	100 U	0.5 U
ACETONE	1.5 J	1.6 J	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 UR	0.5 UJ	0.5 J	100 UJ	0.5 U
ACETONITRILE	--	20 U	20 U	--	--	--	--	--	--	20 U	20 U	20 U	20 U	--
ACROLEIN	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	100 UR	0.5 UR
ACRYLONITRILE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 U	100 U	0.5 U
BENZENE	0.3 U	0.7 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.1	60 U	1.3
BROMODICHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
BROMOFORM	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
BROMOMETHANE	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
CARBON DISULFIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 J	0.3 U	0.3 U	60 U	0.3 U
CARBON TETRACHLORIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
CHLOROBENZENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
CHLORODIBROMOMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
CHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	100 U	0.5 U
CHLOROFORM	0.3 U	4	0.8 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	2.8	60 U	3.5
CHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
CHLOROPRENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	100 U	0.5 U
CIS-1,2-DICHLOROETHENE	3.8	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 J	0.3 U	210	290	310
CIS-1,3-DICHLOROPROPENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
DIBROMOMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
DICHLORODIFLUOROMETHANE	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	60 U	0.3 U
ETHANE	--	1	--	2.5	--	0.99	--	1.8	--	--	--	--	--	0.6
ETHENE	--	0.22	--	0.26	--	0.41	--	0.14	--	--	--	--	--	0.17
ETHYL METHACRYLATE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	100 U	0.5 U
ETHYLBENZENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
ISOBUTANOL	--	20 U	20 U	--	--	--	--	--	--	20 U	20 U	20 U	20 U	--
METHACRYLONITRILE	3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	3 U	0.3 UR	0.3 U	0.3 U	60 U	0.3 U
METHANE	--	4500	--	9400	--	5400	--	9200	--	--	--	--	--	75
METHYL IODIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	100 U	0.5 U
METHYL METHACRYLATE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	100 U	0.5 U
METHYL TERT-BUTYL ETHER	0.5 U	--	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--	--
METHYLENE CHLORIDE	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 UJ	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	60 U	0.3 U
PROPIONITRILE	--	26 J	20 U	--	--	--	--	--	--	20 U	20 U	20 U	20 U	--
STYRENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
TETRACHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 J	0.3 U	1.4	60 U	3.4
TOLUENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.5 J
TOTAL XYLENES	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
TRANS-1,2-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	4.1	60 U	5.8
TRANS-1,3-DICHLOROPROPENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
TRANS-1,4-DICHLORO-2-BUTENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	100 UJ	0.5 U
TRICHLOROETHENE	470	0.3 U	0.3 U	0.6 J	0.3 U	0.3 U	0.3 U	1.4	0.3 U	190	340	11000	19000	18000
TRICHLOROFLUOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	60 U	0.3 U
VINYL ACETATE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	100 U	0.5 UJ
VINYL CHLORIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	2.1	60 U	3.8

LOCATION	16MWT17	16MWT17	16MWT17	16MWT17	16MWT17	16MWT17	16MWT17	16MWT18	16MWT18	16MWT19	16MWT19	16MWT20	16MWT21
SAMPLE ID	16GWT1704	16GWT1705	16GWT1705-D	16GWT1706	16GWT1706-D	16GWT1707	16GWT1708	16GWT1801	16GWT1802	16GWT1901	16GWT1901-D	16GWT2001	16GWT2101
SAMPLE DATE	20050507	20050814	20050814	20060122	20060122	20060508	20070417	20040125	20040827	20040829	20040829	20040829	20041016
ROUND	05	06	06	07	07	08	09	02	03	03	03	03	03
EVENT	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PUZ	PLZMGD	PLZMGD	VALLEY	VALLEY	VALLEY	PLZMGD
SAMPLE CODE	NORMAL	NORMAL	DUP	NORMAL	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	NORMAL	NORMAL
EXPLOSIVES (UG/L)													
1,3,5-TRINITROBENZENE	0.281 U	0.27 U	0.27 U	0.26 U	0.252 U	0.28 U	0.24 U	0.26 U	0.301 U	2.71 U	0.27 U	0.24 U	0.242 U
1,3-DINITROBENZENE	0.281 U	0.27 U	0.27 U	0.26 U	0.252 U	0.28 U	0.24 U	0.26 U	0.301 U	2.71 U	0.27 U	0.24 U	0.242 U
2,2',6,6'-TETRANITRO-4,4'-AZOXYTOLUENE	--	--	--	--	--	--	--	0.49 U	--	--	--	--	--
2,4,6-TRINITROTOLUENE	0.281 U	0.27 U	0.27 U	0.26 U	0.252 U	0.28 U	0.24 U	0.26 U	0.301 U	2.71 U	0.27 U	0.24 U	0.242 U
2,4-DIAMINO-6-NITROTOLUENE	--	0.27 U	0.27 U	--	--	--	--	0.25 U	--	--	--	--	--
2,4-DINITROTOLUENE	0.281 U	0.27 U	0.27 U	0.26 U	0.252 U	0.28 U	0.24 U	0.26 U	0.301 U	2.71 U	0.27 U	0.24 U	0.242 U
2,6-DIAMINO-4-NITROTOLUENE	--	0.27 U	0.27 U	--	--	--	--	0.25 U	--	--	--	--	--
2,6-DINITROTOLUENE	0.281 U	0.27 U	0.27 U	0.26 U	0.252 U	0.28 U	0.24 U	0.26 U	0.301 U	2.71 U	0.27 U	0.24 U	0.242 U
2-AMINO-4,6-DINITROTOLUENE	0.281 U	0.27 U	0.27 U	0.26 U	0.252 U	0.28 U	0.24 U	0.26 U	0.301 U	2.71 U	0.27 U	0.24 U	0.242 U
2-NITROTOLUENE	0.281 U	0.27 U	0.27 U	0.26 U	0.252 U	0.28 U	0.24 U	0.26 U	0.301 U	2.71 U	0.27 U	0.24 U	0.242 U
3,5-DINITROANILINE	--	0.27 U	0.56	--	--	--	--	0.25 U	--	--	--	--	--
3-NITROTOLUENE	0.281 U	0.27 U	0.27 U	0.26 U	0.252 U	0.28 U	0.24 U	0.26 UJ	0.301 U	2.71 U	0.27 U	0.24 U	0.242 U
4,4'-TN-AZOXY	--	0.53 U	0.54 U	--	--	--	--	--	--	--	--	--	--
4-AMINO-2,6-DINITROTOLUENE	0.281 U	0.27 U	0.27 U	0.26 U	0.252 U	0.28 U	0.24 U	0.26 U	0.301 U	2.71 U	0.27 U	0.24 U	0.242 U
4-NITROTOLUENE	0.281 U	0.27 U	0.27 U	0.26 U	0.252 U	0.28 U	0.24 U	0.26 U	0.301 U	2.71 U	0.27 U	0.24 U	0.242 U
DNX	--	0.27 U	0.27 U	--	--	--	--	0.25 U	--	--	--	--	--
HMX	0.281 U	0.27 U	0.29 J	0.26 U	0.252 U	0.28 U	0.35 J	0.26 UJ	0.301 U	2.71 U	0.27 U	0.24 U	0.242 U
MNX	--	0.27 U	0.27 U	--	--	--	--	0.25 U	--	--	--	--	--
NITROBENZENE	0.281 U	0.27 U	0.27 U	0.26 U	0.252 U	0.28 U	0.24 U	0.26 U	0.301 U	2.71 U	0.27 U	0.24 U	0.242 U
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	4.9	4.5	5.7	4.5	4.3	5.8	5.5	0.26 U	0.301 U	2.71 U	0.27 U	0.24 U	0.242 U
TETRYL	0.281 U	0.27 U	0.27 U	0.26 U	0.252 U	0.28 U	0.24 U	0.26 U	0.301 UJ	2.71 UJ	0.27 UJ	0.24 UJ	0.242 U
TNX	--	0.27 U	0.27 U	--	--	--	--	0.25 U	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (UG/L)													
1,1,1,2-TETRACHLOROETHANE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,1-TRICHLOROETHANE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2,2-TETRACHLOROETHANE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2-TRICHLOROETHANE	42	43	49	43	40	30 U	41 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHANE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHENE	6 U	6.3 J	6 U	8 J	7.7 J	30 U	5.7 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2,3-TRICHLOROPROPANE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DIBROMO-3-CHLOROPROPANE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DIBROMOETHANE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROETHANE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROPROPANE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-DIOXANE	--	--	--	--	--	--	--	50 U	50 U	50 U	50 U	50 U	50 U
2-BUTANONE	10 U	5 U	10 U	5 U	5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-HEXANONE	10 U	5 U	10 U	5 U	5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
3-CHLOROPROPENE	10 U	5 U	10 U	5 U	5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-METHYL-2-PENTANONE	10 U	5 U	10 U	5 U	5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ACETONE	10 UJ	5 UJ	10 UJ	5 UJ	5 UJ	50 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	7.4 J
ACETONITRILE	--	--	--	--	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U
ACROLEIN	10 UR	5 UR	10 UR	5 UR	5 UR	50 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
ACRYLONITRILE	10 U	5 U	10 U	5 U	5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BENZENE	6 U	3 U	6 U	3 U	3 U	30 U	1 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMODICHLOROMETHANE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMOFORM	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMOMETHANE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CARBON DISULFIDE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CARBON TETRACHLORIDE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROBENZENE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLORODIBROMOMETHANE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROETHANE	10 U	5 U	10 U	5 U	5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	6 U	3 U	6 U	3 U	3 U	30 U	2.6 J	1	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROMETHANE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROPRENE	10 U	5 U	10 U	5 U	5 U	50 U	0.5 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	260	290	320	340	330	260	300	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CIS-1,3-DICHLOROPROPENE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
DIBROMOMETHANE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
DICHLORODIFLUOROMETHANE	6 U	3 UJ	6 UJ	3 U	3 U	30 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U
ETHANE	--	0.74	0.66	--	--	0.45	--	5.4	--	--	--	--	--
ETHENE	--	0.2	0.19	--	--	0.1	--	0.14	--	--	--	--	--
ETHYL METHACRYLATE	10 U	5 U	10 U	5 U	5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.9 J
ISOBUTANOL	--	--	--	--	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U
METHACRYLONITRILE	6 U	3 U	6 U	3 U	3 U	30 U	3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
METHANE	--	95	88	--	--	88	--	5800	--	--	--	--	--
METHYL IODIDE	10 U	5 U	10 U	5 U	5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL METHACRYLATE	10 U	5 U	10 U	5 U	5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL TERT-BUTYL ETHER	--	5 U	10 U	5 U	5 U	50 U	0.5 U	--	--	--	--	--	--
METHYLENE CHLORIDE	6 UJ	3 U	6 U	3 UJ	3 UJ	30 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PROPIONITRILE	--	--	--	--	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U
STYRENE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TETRACHLOROETHENE	6 U	3 U	6 U	3 U	3 U	30 U	4.5 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TOLUENE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.3
TOTAL XYLENES	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	2.2
TRANS-1,2-DICHLOROETHENE	6 U	3 U	6 U	5.5 J	5.3 J	30 U	4.8 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,3-DICHLOROPROPENE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,4-DICHLORO-2-BUTENE	10 U	5 U	10 U	5 U	5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U
TRICHLOROETHENE	19000	19000	20000	22000	18000	25000	24000 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRICHLOROFLUOROMETHANE	6 U	3 U	6 U	3 U	3 U	30 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 UJ
VINYL ACETATE	10 U	5 U	10 U	5 U	5 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VINYL CHLORIDE	6 U	3 U	6 U	3 U	3 U	30 U	2.1 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U

LOCATION	16SW/SD01	16SW/SD01	16SW/SD02	16SW/SD02	16SW/SD02	16SW/SD03	16SW/SD04	16SW/SD05	16SW/SD06	16SW/SD06	16SW/SD07	16SW/SD07	16SW/SD07	16SW/SD08
SAMPLE ID	16SW0101	16SW0102	16SW0201	16SW0202	16SW0202-D	16SD0301	16SD0401	16SD0501	16SD0601	16SD0601-D	16SW0701	16SW0701-D	16SW0702	16SD0801
SAMPLE DATE	20030401	20031206	20030410	20031206	20031206	20030401	20030401	20030401	20030401	20030401	20030410	20030410	20031206	20030401
ROUND	01	02	01	02	02	01	01	01	01	01	01	01	02	01
EVENT (1)	SUMP	SUMP	SUMP	SUMP	SUMP	GULLY	GULLY	GULLY	GULLY	GULLY	SUMP	SUMP	SUMP	GULLY
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	DUP	NORMAL	NORMAL	NORMAL	NORMAL	DUP	NORMAL	DUP	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SD	SD	SD	SD	SD	SW	SW	SW	SD
TOP DEPTH	NA	NA	NA	NA	NA	0	0	0	0	0	NA	NA	NA	0
BOTTOM DEPTH	NA	NA	NA	NA	NA	0.3	0.3	0.3	0.3	0.3	NA	NA	NA	0.3
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	UG/L	UG/L	UG/L	MG/KG
EXPLOSIVES														
1,3,5-TRINITROBENZENE	0.455 U	--	0.8 U	--	--	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.55 U	0.42 U	--	0.25 U
1,3-DINITROBENZENE	0.455 U	--	0.8 U	--	--	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.55 U	0.42 U	--	0.25 U
2,2',6,6'-TETRANITRO-4,4'-AZOXYTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	0.455 U	--	0.8 U	--	--	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2.1	2.1	--	0.25 U
2,4-DIAMINO-6-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	0.455 U	--	0.8 U	--	--	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.55 U	0.42 U	--	0.25 U
2,6-DIAMINO-4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	0.455 U	--	0.8 U	--	--	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.55 U	0.42 U	--	0.25 U
2-AMINO-4,6-DINITROTOLUENE	0.455 U	--	0.8 U	--	--	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.89 J	0.86 J	--	0.25 U
2-NITROTOLUENE	0.455 U	--	0.8 U	--	--	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.55 U	0.42 U	--	0.25 U
3,5-DINITROANILINE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-NITROTOLUENE	0.455 U	--	0.8 U	--	--	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.55 U	0.42 U	--	0.25 U
4-AMINO-2,6-DINITROTOLUENE	0.455 U	--	0.8 U	--	--	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2.2 J	2.2 J	--	0.25 U
4-NITROTOLUENE	0.455 U	--	0.8 U	--	--	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.55 U	0.42 U	--	0.25 U
DNX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMX	29000	--	1.5 J	--	--	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.55 U	0.42 U	--	0.25 U
MNX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	0.455 U	--	0.8 U	--	--	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.55 U	0.42 U	--	0.25 U
PICRAMIC ACID	0.39 U	--	0.39 UJ	--	--	0.019 U	0.021 U	0.02 U	0.021 U	0.021 U	0.39 U	0.39 U	--	0.022 U
PICRIC ACID	0.39 U	--	0.39 U	--	--	0.019 U	0.021 U	0.02 U	0.021 U	0.021 U	0.39 U	0.39 U	--	0.022 U
RDX	88000	--	9.2	--	--	0.27 J	0.25 U	0.25 U	0.25 U	0.25 U	2.9	2.9	--	0.25 U
TETRYL	0.455 U	--	0.8 U	--	--	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.55 U	0.42 U	--	0.25 U
TNX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS														
1,1,1,2-TETRACHLOROETHANE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
1,1,1-TRICHLOROETHANE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
1,1,2,2-TETRACHLOROETHANE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
1,1,2-TRICHLOROETHANE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
1,1-DICHLOROETHANE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
1,1-DICHLOROETHENE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
1,2,3-TRICHLOROPROPANE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
1,2-DIBROMO-3-CHLOROPROPANE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
1,2-DIBROMOETHANE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
1,2-DICHLOROETHANE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
1,2-DICHLOROPROPANE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
1,4-DIOXANE	--	50 U	--	50 U	50 U	--	--	--	--	--	--	--	50 U	--
2-BUTANONE	--	0.5 U	--	0.5 U	0.5 U	--	--	--	--	--	--	--	0.5 U	--
2-HEXANONE	--	0.5 U	--	0.5 U	0.5 U	--	--	--	--	--	--	--	0.5 U	--
3-CHLOROPROPENE	--	0.5 U	--	0.5 U	0.5 U	--	--	--	--	--	--	--	0.5 U	--
4-METHYL-2-PENTANONE	--	0.5 U	--	0.5 U	0.5 U	--	--	--	--	--	--	--	0.5 U	--
ACETONE	--	0.5 UJ	--	0.5 UJ	0.5 UJ	--	--	--	--	--	--	--	0.5 UJ	--
ACETONITRILE	--	20 U	--	20 U	20 U	--	--	--	--	--	--	--	20 U	--
ACROLEIN	--	0.5 UR	--	0.5 UR	0.5 UR	--	--	--	--	--	--	--	0.5 UR	--
ACRYLONITRILE	--	0.5 U	--	0.5 U	0.5 U	--	--	--	--	--	--	--	0.5 U	--
BENZENE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
BROMODICHLOROMETHANE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
BROMOFORM	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
BROMOMETHANE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
CARBON DISULFIDE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
CARBON TETRACHLORIDE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
CHLOROBENZENE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
CHLORODIBROMOMETHANE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
CHLOROETHANE	--	0.5 U	--	0.5 U	0.5 U	--	--	--	--	--	--	--	0.5 U	--
CHLOROFORM	--	0.3 U	--	2.4	2.5	--	--	--	--	--	--	--	0.3 U	--
CHLOROMETHANE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
CHLOROPRENE	--	0.5 U	--	0.5 U	0.5 U	--	--	--	--	--	--	--	0.5 U	--
CIS-1,2-DICHLOROETHENE	--	0.3 U	--	7.1	7.4	--	--	--	--	--	--	--	2.9	--
CIS-1,3-DICHLOROPROPENE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
DIBROMOMETHANE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
DICHLORODIFLUOROMETHANE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
ETHYL METHACRYLATE	--	0.5 U	--	0.5 U	0.5 U	--	--	--	--	--	--	--	0.5 U	--
ETHYLBENZENE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
ISOBUTANOL	--	20 U	--	20 U	20 U	--	--	--	--	--	--	--	20 U	--
METHACRYLONITRILE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
METHYL IODIDE	--	0.5 U	--	0.5 U	0.5 U	--	--	--	--	--	--	--	0.5 U	--
METHYL METHACRYLATE	--	0.5 U	--	0.5 U	0.5 U	--	--	--	--	--	--	--	0.5 U	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
PROPIONITRILE	--	20 U	--	20 U	20 U	--	--	--	--	--	--	--	20 U	--
STYRENE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
TETRACHLOROETHENE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
TOLUENE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
TOTAL XYLENES	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
TRANS-1,2-DICHLOROETHENE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
TRANS-1,3-DICHLOROPROPENE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
TRANS-1,4-DICHLORO-2-BUTENE	--	0.5 U	--	0.5 U	0.5 U	--	--	--	--	--	--	--	0.5 U	--
TRICHLOROETHENE	--	3.3	--	8.8	9.2	--	--	--	--	--	--	--	6.6	--
TRICHLOROFLUOROMETHANE	--	0.3 U	--	0.3 U	0.3 U	--	--	--	--	--	--	--	0.3 U	--
VINYL ACETATE	--	0.5 U	--	0.5 U	0.5 U	--	--	--	--	--	--	--	0.5 U	--
VINYL CHLORIDE	--	0.3 U	--	0.3 U	0.7 J	--	--	--	--	--	--	--	0.3 U	--

LOCATION	16SW/SD09	16SW/SD10	16SW/SD10	16SW/SD10	16SW/SD10	16SW/SD10	16SW/SD10	16SW/SD10	16SW/SD11	16SW/SD11	16SW/SD12	16SW/SD12	16SW/SD12	16SW/SD12
SAMPLE ID	16SD0901	16SD1001	16SW1002	16SW1003	16SW1004	16SW1006	16SW1007	16SW1007-D	16SD1101	16SD1101-D	16SD1201	16SW1201	16SW1202	16SW1203
SAMPLE DATE	20030401	20030401	20050203	20050508	20060105	20060503	20070501	20070501	20030401	20030401	20031025	20031025	20041102	20050203
ROUND	01	01	04	05	07	08	09	09	01	01	02	02	03	04
EVENT [1]	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	NORMAL	DUP	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SW	SW	SW	SW	SW	SW	SD	SD	SD	SW	SW	SW
TOP DEPTH	0	0	NA	NA	NA	NA	NA	NA	0	0	0	NA	NA	NA
BOTTOM DEPTH	0.3	0.3	NA	NA	NA	NA	NA	NA	0.3	0.3	0.3	NA	NA	NA
UNITS	MG/KG	MG/KG	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	MG/KG	MG/KG	MG/KG	UG/L	UG/L	UG/L
EXPLOSIVES														
1,3,5-TRINITROBENZENE	0.25 U	0.25 U	0.242 U	0.25 U	0.24 U	0.25 U	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U	0.255 U	0.24 U
1,3-DINITROBENZENE	0.25 U	0.25 U	0.242 U	0.25 U	0.24 U	0.25 U	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U	0.255 U	0.24 U
2,2',6,6'-TETRANITRO-4,4'-AZOXYTOLUENE	--	--	--	--	--	--	--	--	--	--	--	0.5 U	--	--
2,4,6-TRINITROTOLUENE	0.25 U	0.25 U	0.242 U	0.25 U	0.24 U	0.25 U	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U	0.255 U	0.24 U
2,4-DIAMINO-6-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	0.25 U	--	--
2,4-DINITROTOLUENE	0.25 U	0.25 U	0.242 U	0.25 U	0.24 U	0.25 U	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U	0.255 U	0.24 U
2,6-DIAMINO-4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	0.25 U	--	--
2,6-DINITROTOLUENE	0.25 U	0.25 U	0.242 U	0.25 U	0.24 U	0.25 U	0.25 U	--	0.25 U	0.25 U	0.54 J	0.25 U	0.255 U	0.24 U
2-AMINO-4,6-DINITROTOLUENE	0.25 U	0.25 U	0.242 U	0.25 U	0.24 U	0.25 U	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U	0.255 U	0.24 U
2-NITROTOLUENE	0.25 U	0.25 U	0.242 U	0.6	0.24 U	0.25 U	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U	0.255 U	0.24 U
3,5-DINITROANILINE	--	--	--	--	--	--	--	--	--	--	--	0.25 U	--	--
3-NITROTOLUENE	0.25 U	0.25 U	0.242 U	0.25 U	0.24 U	0.25 U	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U	0.255 U	0.24 U
4-AMINO-2,6-DINITROTOLUENE	0.25 U	0.25 U	0.242 U	0.25 U	0.24 U	0.25 U	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U	0.255 U	0.24 U
4-NITROTOLUENE	0.25 U	0.25 U	0.242 U	0.25 U	0.24 U	0.25 U	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U	0.255 U	0.24 U
DNX	--	--	--	--	--	--	--	--	--	--	--	0.25 U	--	--
HMX	0.25 U	0.25 U	0.242 U	0.25 U	0.24 U	0.25 U	0.25 U	--	0.25 U	0.25 U	0.25 U	0.27 J	0.255 U	0.24 U
MNX	--	--	--	--	--	--	--	--	--	--	--	0.25 U	--	--
NITROBENZENE	0.25 U	0.25 U	0.242 U	0.25 U	0.24 U	0.25 U	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U	0.255 U	0.24 U
PICRAMIC ACID	0.021 U	0.021 U	--	--	--	--	--	--	0.029 U	0.029 U	--	--	--	--
PICRIC ACID	0.021 U	0.021 U	--	--	--	--	--	--	0.029 U	0.029 U	--	--	--	--
RDX	0.25 U	0.25 U	0.242 U	0.25 U	0.77	0.25 U	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U	0.255 U	0.24 U
TETRYL	0.25 U	0.25 U	0.242 U	0.25 U	0.24 U	0.25 U	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U	0.255 U	0.24 U
TNX	--	--	--	--	--	--	--	--	--	--	--	0.25 U	--	--
VOLATILE ORGANIC COMPOUNDS														
1,1,1,2-TETRACHLOROETHANE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
1,1,1-TRICHLOROETHANE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
1,1,2,2-TETRACHLOROETHANE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
1,1,2-TRICHLOROETHANE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHANE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHENE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
1,2,3-TRICHLOROPROPANE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
1,2-DIBROMO-3-CHLOROPROPANE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 UJ	0.3 U	0.3 U
1,2-DIBROMOETHANE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROETHANE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROPROPANE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
1,4-DIOXANE	--	--	--	--	--	--	--	--	--	--	0.131 U	50 U	50 U	--
2-BUTANONE	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.0014 U	0.5 U	0.5 U	0.5 U
2-HEXANONE	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.0014 U	0.5 U	0.5 U	0.5 U
3-CHLOROPROPENE	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.0014 U	0.5 U	0.5 U	0.5 U
4-METHYL-2-PENTANONE	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.0014 U	0.5 U	0.5 U	0.5 U
ACETONE	--	--	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.77 J	0.5 U	--	--	0.011 J	0.5 UJ	1.6 J	0.5 U
ACETONITRILE	--	--	--	--	--	--	--	--	--	--	0.0524 U	20 U	20 U	--
ACROLEIN	--	--	0.5 UR	0.5 UR	0.5 UR	0.5 U	0.5 UR	0.5 UR	--	--	0.0014 UR	0.5 UR	0.5 UR	0.5 UR
ACRYLONITRILE	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.0014 U	0.5 U	0.5 U	0.5 U
BENZENE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
BROMODICHLOROMETHANE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
BROMOFORM	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
BROMOMETHANE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 UJ	0.3 U	0.3 U
CARBON DISULFIDE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
CARBON TETRACHLORIDE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
CHLOROBENZENE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
CHLORODIBROMOMETHANE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
CHLOROETHANE	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.0014 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
CHLOROMETHANE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
CHLOROPRENE	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.0014 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.003 J	1.4	0.3 U	1.3
CIS-1,3-DICHLOROPROPENE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
DIBROMOMETHANE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
DICHLORODIFLUOROMETHANE	--	--	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
ETHYL METHACRYLATE	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.0014 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
ISOBUTANOL	--	--	--	--	--	--	--	--	--	--	0.0524 U	20 U	20 U	--
METHACRYLONITRILE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	3 U	3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
METHYL IODIDE	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.0014 UJ	0.5 UJ	0.5 U	0.5 U
METHYL METHACRYLATE	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.0014 U	0.5 U	0.5 U	0.5 U
METHYL TERT-BUTYL ETHER	--	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	0.3 U	0.3 UJ	0.3 UJ	0.3 U	0.3 U	0.3 U	--	--	0.0014 UJ	0.3 U	0.3 U	0.3 U
PROPIONITRILE	--	--	--	--	--	--	--	--	--	--	0.0524 U	20 U	20 U	--
STYRENE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
TETRACHLOROETHENE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
TOLUENE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
TOTAL XYLENES	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
TRANS-1,2-DICHLOROETHENE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
TRANS-1,3-DICHLOROPROPENE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U
TRANS-1,4-DICHLORO-2-BUTENE	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.0014 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.002 J	15	5.6	20
TRICHLOROFLUOROMETHANE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 UJ	0.3 U	0.3 U
VINYL ACETATE	--	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.0014 U	0.5 U	0.5 U	0.5 UJ
VINYL CHLORIDE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.0014 U	0.3 U	0.3 U	0.3 U

LOCATION	16SW/SD12	16SW/SD12	16SW/SD12	16SW/SD12	16SW/SD13	16SW/SD13	16SW/SD13	16SW/SD13	16SW/SD13	16SW/SD13	16SW/SD13	16SW/SD13	16SW/SD13	16SW/SD14
SAMPLE ID	16SW1204	16SW1205	16SW1207	16SW1208	16SD1301	16SD1301-D	16SW1301	16SW1302	16SW1303	16SW1304	16SW1305	16SW1307	16SW1308	16SW1401
SAMPLE DATE	20050508	20060105	20060504	20070501	20031025	20031025	20031025	20041102	20050203	20050508	20060105	20060504	20070501	20031024
ROUND	05	07	08	09	02	02	02	03	04	05	07	08	09	02
EVENT (1)	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY-UPGRAD
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SD	SD	SW	SW	SW	SW	SW	SW	SW	SW
TOP DEPTH	NA	NA	NA	NA	0	0	NA	NA	NA	NA	NA	NA	NA	NA
BOTTOM DEPTH	NA	NA	NA	NA	0.3	0.3	NA	NA	NA	NA	NA	NA	NA	NA
UNITS	UG/L	UG/L	UG/L	UG/L	MG/KG	MG/KG	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
EXPLOSIVES														
1,3,5-TRINITROBENZENE	0.25 U	0.248 U	0.25 U	0.28 U	0.25 U	0.25 U	0.25 U	0.25 U	0.24 U	0.245 U	0.242 U	0.25 U	0.27 U	0.25 U
1,3-DINITROBENZENE	0.25 U	0.248 U	0.25 U	0.28 U	0.25 U	0.25 U	0.25 U	0.25 U	0.24 U	0.245 U	0.242 U	0.25 U	0.27 U	0.25 U
2,2',6,6'-TETRANITRO-4,4'-AZOXYTOLUENE	--	--	--	--	--	--	0.5 U	--	--	--	--	--	--	0.5 U
2,4,6-TRINITROTOLUENE	0.25 U	0.248 U	0.25 U	0.28 U	0.25 U	0.25 U	0.25 U	0.25 U	0.24 U	0.245 U	0.242 U	0.25 U	0.27 U	0.25 U
2,4-DIAMINO-6-NITROTOLUENE	--	--	--	--	--	--	0.25 U	--	--	--	--	--	--	0.25 U
2,4-DINITROTOLUENE	0.25 U	0.248 U	0.25 U	0.28 U	0.25 U	0.25 U	0.25 U	0.25 U	0.24 U	0.245 U	0.242 U	0.25 U	0.27 U	0.25 U
2,6-DIAMINO-4-NITROTOLUENE	--	--	--	--	--	--	0.25 U	--	--	--	--	--	--	0.25 U
2,6-DINITROTOLUENE	0.25 U	0.248 U	0.25 U	0.28 U	0.25 U	0.25 U	0.25 U	0.25 U	0.24 U	0.245 U	0.242 U	0.25 U	0.27 U	0.25 U
2-AMINO-4,6-DINITROTOLUENE	0.25 U	0.248 U	0.25 U	0.28 U	0.25 U	0.25 U	0.25 U	0.25 U	0.24 U	0.245 U	0.242 U	0.25 U	0.27 U	0.25 U
2-NITROTOLUENE	0.25 U	0.248 U	0.25 U	0.28 U	0.25 U	0.25 U	0.25 U	0.25 U	0.24 U	0.245 U	0.242 U	0.25 U	0.27 U	0.25 U
3,5-DINITROANILINE	--	--	--	--	--	--	0.25 U	--	--	--	--	--	--	0.25 U
3-NITROTOLUENE	0.25 U	0.248 U	0.25 U	0.28 U	0.25 U	0.25 U	0.25 U	0.25 U	0.24 U	0.245 U	0.242 U	0.25 U	0.27 U	0.25 U
4-AMINO-2,6-DINITROTOLUENE	0.25 U	0.248 U	0.25 U	0.28 U	0.25 U	0.25 U	0.25 U	0.25 U	0.24 U	0.245 U	0.242 U	0.25 U	0.27 U	0.25 U
4-NITROTOLUENE	0.25 U	0.248 U	0.25 U	0.28 U	0.25 U	0.25 U	0.25 U	0.25 U	0.24 U	0.245 U	0.242 U	0.25 U	0.27 U	0.25 U
DNX	--	--	--	--	--	--	0.25 U	--	--	--	--	--	--	0.25 U
HMX	0.25 U	0.248 U	0.25 U	0.28 U	0.25 U	0.25 U	0.25 U	0.25 U	0.24 U	0.245 U	0.242 U	0.25 U	0.27 U	0.25 U
MNX	--	--	--	--	--	--	0.25 U	--	--	--	--	--	--	0.25 U
NITROBENZENE	0.25 U	0.248 U	0.25 U	0.28 U	0.25 U	0.25 U	0.25 U	0.25 U	0.24 U	0.245 U	0.242 U	0.25 U	0.27 U	0.25 U
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	0.25 U	0.248 U	0.25 U	0.28 U	0.25 U	0.25 U	0.25 U	0.25 U	0.24 U	0.245 U	0.242 U	0.25 U	0.27 U	0.25 U
TETRYL	0.25 U	0.248 U	0.25 U	0.28 U	0.25 U	0.25 U	0.25 U	0.25 U	0.24 U	0.245 U	0.242 U	0.25 U	0.27 U	0.25 U
TNX	--	--	--	--	--	--	0.25 U	--	--	--	--	--	--	0.25 U
VOLATILE ORGANIC COMPOUNDS														
1,1,1,2-TETRACHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,1-TRICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2,2-TETRACHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2-TRICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2,3-TRICHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DIBROMO-3-CHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DIBROMOETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROPROPANE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-DIOXANE	--	--	--	--	0.124 U	0.126 U	50 U	50 U	--	--	--	--	--	50 U
2-BUTANONE	0.5 U	0.5 U	0.5 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UR
2-HEXANONE	0.5 U	0.5 U	0.5 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
3-CHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-METHYL-2-PENTANONE	0.5 U	0.5 U	0.5 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ACETONE	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.006 J	0.0013 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.81 J	0.5 UR
ACETONITRILE	--	--	--	--	0.0493 U	0.0504 U	20 U	20 U	--	--	--	--	--	20 U
ACROLEIN	0.5 UR	0.5 UR	0.5 U	0.5 UR	0.0012 UR	0.0013 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U	0.5 UR	0.5 UR
ACRYLONITRILE	0.5 U	0.5 U	0.5 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UR
BENZENE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMODICHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMOFORM	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMOMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CARBON DISULFIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CARBON TETRACHLORIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROBENZENE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLORODIBROMOMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROPRENE	0.5 U	0.5 U	0.5 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.3 U	0.3 U	0.6 J	0.63 J	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CIS-1,3-DICHLOROPROPENE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
DIBROMOMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
DICHLORODIFLUOROMETHANE	0.3 U	0.3 UJ	0.3 U	0.3 UJ	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 UJ	0.3 U
ETHYL METHACRYLATE	0.5 U	0.5 U	0.5 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
ISOBUTANOL	--	--	--	--	0.0493 U	0.0504 U	20 U	20 U	--	--	--	--	--	20 U
METHACRYLONITRILE	0.3 U	0.3 U	0.3 U	3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	3 U	0.3 UR
METHYL IODIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.0012 UJ	0.0013 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
METHYL METHACRYLATE	0.5 U	0.5 U	0.5 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL TERT-BUTYL ETHER	--	0.5 U	0.5 U	0.5 U	--	--	--	--	--	--	0.5 U	0.5 U	0.5 U	--
METHYLENE CHLORIDE	0.3 U	0.3 UJ	0.3 U	0.3 U	0.0012 UJ	0.0013 UJ	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 UJ	0.3 U	0.3 U	0.3 U
PROPIONITRILE	--	--	--	--	0.0493 U	0.0504 U	20 U	20 U	--	--	--	--	--	20 U
STYRENE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TETRACHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TOLUENE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TOTAL XYLENES	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,2-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,3-DICHLOROPROPENE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,4-DICHLORO-2-BUTENE	0.5 U	0.5 U	0.5 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	6.7	11	8.7	8.5	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRICHLOROFLUOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
VINYL ACETATE	0.5 U	0.5 U	0.5 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VINYL CHLORIDE	0.3 U	0.3 U	0.3 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U

TABLE A.2-4
SURFACE WATER AND SEDIMENT SAMPLE ANALYTICAL RESULTS FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNDS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION	16SW/SD14	16SW/SD15	16SW/SD15	16SW/SD16	16SW/SD17	16SW/SD17	16SW/SD17	16SW/SD17	16SW/SD18	16SW/SD18	16SW/SD19	16SW/SD20	16SW/SD20	16SW/SD21
SAMPLE ID	16SD1401	16SW1501	16SD1501	16SD1601	16SW1701	16SW1701-D	16SD1701	16SD1701-D	16SW1801	16SD1801	16SD1901	16SW2001	16SD2001	16SW2101
SAMPLE DATE	20031024	20031025	20031024	20031024	20031024	20031024	20031024	20031024	20031024	20031024	20031024	20031025	20031025	20031024
ROUND	02	02	02	02	02	02	02	02	02	02	02	02	02	02
EVENT [(1)]	GULLY-UPGRAD	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	TCMS-UPGRAD	TCMS-UPGRAD	TCMS	GULLY-UPGRAD	GULLY-UPGRAD	GULLY-UPGRAD
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	NORMAL	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SW	SD	SD	SW	SW	SD	SD	SW	SD	SD	SW	SD	SW
TOP DEPTH	0	NA	0	0	NA	NA	0	0	NA	0	0	NA	0	NA
BOTTOM DEPTH	0.3	NA	0.3	0.3	NA	NA	0.3	0.3	NA	0.3	0.3	NA	0.3	NA
UNITS	MG/KG	UG/L	MG/KG	MG/KG	UG/L	UG/L	MG/KG	MG/KG	UG/L	MG/KG	MG/KG	UG/L	MG/KG	UG/L
EXPLOSIVES														
1,3,5-TRINITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.26 U	0.25 U	0.25 U
1,3-DINITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.26 U	0.25 U	0.25 U
2,2',6,6'-TETRANITRO-4,4'-AZOXYTOLUENE	--	0.5 U	--	--	0.5 U	0.49 U	--	--	0.49 U	--	--	0.52 U	--	0.51 U
2,4,6-TRINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.26 U	0.25 U	0.25 U
2,4-DIAMINO-6-NITROTOLUENE	--	0.25 U	--	--	0.25 U	0.25 U	--	--	0.25 U	--	--	0.26 U	--	0.25 U
2,4-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.26 U	0.25 U	0.25 U
2,6-DIAMINO-4-NITROTOLUENE	--	0.25 U	--	--	0.25 U	0.25 U	--	--	0.25 U	--	--	0.26 U	--	0.25 U
2,6-DINITROTOLUENE	0.25 U	0.25 U	0.92 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.26 U	0.25 U	0.25 U
2-AMINO-4,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.26 U	0.25 U	0.25 U
2-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.26 U	0.25 U	0.25 U
3,5-DINITROANILINE	--	0.25 U	--	--	0.25 U	0.25 U	--	--	0.25 U	--	--	0.26 U	--	0.25 U
3-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.26 U	0.25 U	0.25 U
4-AMINO-2,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.26 U	0.25 U	0.25 U
4-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.26 U	0.25 U	0.25 U
DNX	--	0.25 U	--	--	0.25 U	0.25 U	--	--	0.25 U	--	--	0.26 U	--	0.25 U
HMX	0.25 U	0.51 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.26 U	0.25 U	0.25 U
MNX	--	0.25 U	--	--	0.25 U	0.25 U	--	--	0.25 U	--	--	0.26 U	--	0.25 U
NITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.26 U	0.25 U	0.25 U
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RDX	0.25 U	0.29 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.26 U	0.25 U	0.25 U
TETRYL	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.26 U	0.25 U	0.25 U
TNX	--	0.25 U	--	--	0.25 U	0.25 U	--	--	0.25 U	--	--	0.26 U	--	0.25 U
VOLATILE ORGANIC COMPOUNDS														
1,1,1,2-TETRACHLOROETHANE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
1,1,1-TRICHLOROETHANE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
1,1,2,2-TETRACHLOROETHANE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
1,1,2-TRICHLOROETHANE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
1,1-DICHLOROETHANE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
1,1-DICHLOROETHENE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
1,2,3-TRICHLOROPROPANE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 UJ	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
1,2-DIBROMO-3-CHLOROPROPANE	0.0012 U	0.3 UJ	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 UJ	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 UJ	0.0012 U	0.3 U
1,2-DIBROMOETHANE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
1,2-DICHLOROETHANE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
1,2-DICHLOROPROPANE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
1,4-DIOXANE	0.118 U	50 U	0.125 U	0.113 U	50 U	50 U	0.133 UJ	0.117 U	50 U	0.119 U	0.137 U	50 U	0.123 U	50 U
2-BUTANONE	0.0012 U	0.5 U	0.0012 U	0.0013 U	0.5 UR	0.5 UR	0.0013 U	0.0012 U	0.5 UR	0.0012 U	0.001 U	0.5 U	0.0012 U	0.5 UR
2-HEXANONE	0.0012 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.0013 U	0.0012 U	0.5 U	0.0012 U	0.001 U	0.5 U	0.0012 U	0.5 U
3-CHLOROPROPENE	0.0012 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.0013 U	0.0012 U	0.5 U	0.0012 U	0.001 U	0.5 U	0.0012 U	0.5 U
4-METHYL-2-PENTANONE	0.0012 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.0013 U	0.0012 U	0.5 U	0.0012 U	0.001 U	0.5 U	0.0012 U	0.5 U
ACETONE	0.007 J	0.5 UJ	0.007 J	0.003 J	0.5 UR	0.5 UR	0.0013 U	0.005 J	0.5 UR	0.0012 U	0.007 J	0.6 J	0.005 J	0.5 UR
ACETONITRILE	0.0472 U	20 U	0.0501 U	0.0451 U	20 U	20 U	0.0531 U	0.0467 U	20 U	0.0473 U	0.0548 U	20 U	0.0493 U	20 U
ACROLEIN	0.0012 UR	0.5 UR	0.0012 UR	0.0013 UR	0.5 UR	0.5 UR	0.0013 UR	0.0012 UR	0.5 UR	0.0012 UR	0.001 UR	0.5 UR	0.0012 UR	0.5 UR
ACRYLONITRILE	0.0012 U	0.5 U	0.0012 U	0.0013 U	0.5 UR	0.5 UR	0.0013 U	0.0012 U	0.5 UR	0.0012 U	0.001 U	0.5 U	0.0012 U	0.5 UR
BENZENE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
BROMODICHLOROMETHANE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
BROMOFORM	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
BROMOMETHANE	0.0012 U	0.3 UJ	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 UJ	0.0012 U	0.3 U
CARBON DISULFIDE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
CARBON TETRACHLORIDE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
CHLOROBENZENE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
CHLORODIBROMOMETHANE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
CHLOROETHANE	0.0012 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.0013 U	0.0012 U	0.5 U	0.0012 U	0.001 U	0.5 U	0.0012 U	0.5 U
CHLOROFORM	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
CHLOROMETHANE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
CHLOROPRENE	0.0012 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.0013 U	0.0012 U	0.5 U	0.0012 U	0.001 U	0.5 U	0.0012 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
CIS-1,3-DICHLOROPROPENE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
DIBROMOMETHANE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
DICHLORODIFLUOROMETHANE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 UJ	0.0012 U	0.3 U	0.0012 U	0.022	0.3 U	0.0012 U	0.3 U
ETHYL METHACRYLATE	0.0012 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.0013 U	0.0012 U	0.5 U	0.0012 U	0.001 U	0.5 U	0.0012 U	0.5 U
ETHYLBENZENE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
ISOBUTANOL	0.0472 U	20 U	0.0501 U	0.0451 U	20 U	20 U	0.0531 U	0.0467 U	20 U	0.0473 U	0.0548 U	20 U	0.0493 U	20 U
METHACRYLONITRILE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 UR	0.3 UR	0.0013 U	0.0012 U	0.3 UR	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 UR
METHYL IODIDE	0.0012 UJ	0.5 UJ	0.0012 UJ	0.0013 UJ	0.5 UJ	0.5 UJ	0.0013 UJ	0.0012 UJ	0.5 UJ	0.0012 UJ	0.001 UJ	0.5 UJ	0.0012 UJ	0.5 UJ
METHYL METHACRYLATE	0.0012 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.0013 U	0.0012 U	0.5 U	0.0012 U	0.001 U	0.5 U	0.0012 U	0.5 U
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	0.0012 UJ	0.3 U	0.0012 UJ	0.0013 UJ	0.3 U	0.3 U	0.0013 UJ	0.0012 UJ	0.3 U	0.0012 UJ	0.001 UJ	0.3 U	0.0012 UJ	0.3 U
PROPIONITRILE	0.0472 U	20 U	0.0501 U	0.0451 U	20 U	20 U	0.0531 U	0.0467 U	20 U	0.0473 U	0.0548 U	20 U	0.0493 U	20 U
STYRENE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
TETRACHLOROETHENE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
TOLUENE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
TOTAL XYLENES	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
TRANS-1,2-DICHLOROETHENE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
TRANS-1,3-DICHLOROPROPENE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
TRANS-1,4-DICHLORO-2-BUTENE	0.0012 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.0013 U	0.0012 U	0.5 U	0.0012 U	0.001 U	0.5 U	0.0012 U	0.5 U
TRICHLOROETHENE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U
TRICHLOROFLUOROMETHANE	0.0012 U	0.3 UJ	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 UJ	0.0012 U	0.3 U
VINYL ACETATE	0.0012 U	0.5 U	0.0012 U	0.0013 U	0.5 U	0.5 U	0.0013 U	0.0012 U	0.5 U	0.0012 U	0.001 U	0.5 U	0.0012 U	0.5 U
VINYL CHLORIDE	0.0012 U	0.3 U	0.0012 U	0.0013 U	0.3 U	0.3 U	0.0013 U	0.0012 U	0.3 U	0.0012 U	0.001 U	0.3 U	0.0012 U	0.3 U

TABLE A.2-4
SURFACE WATER AND SEDIMENT SAMPLE ANALYTICAL RESULTS FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNDS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION	16SW/SD21	16SW/SD22	16SW/SD23	16SW/SD24	16SW/SD24	16SW/SD26	16SW/SD27	16SW/SD27	16SW/SD28	16SW/SD28	16SW/SD29	16SW/SD29	16SW/SD30	16SW/SD30
SAMPLE ID	16SD2101	16SD2201	16SD2301	16SW2401	16SW2401-D	16SW2601	16SW2701	16SD2701	16SW2801	16SD2801	16SW2901	16SD2901	16SW3001	16SW3001-D
SAMPLE DATE	20031024	20031024	20030401	20041008	20041008	20041026	20041102	20041007	20041111	20041008	20041111	20041008	20041026	20041026
ROUND	02	02	01	03	03	03	03	03	03	03	03	03	03	03
EVENT (1)	GULLY-UPGRAD	GULLY	GULLY	TCMS	TCMS	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
MATRIX	SD	SD	SD	SW	SW	SW	SW	SD	SW	SD	SW	SD	SW	SW
TOP DEPTH	0	0	0	NA	NA	NA	NA	0	NA	0	NA	0	NA	NA
BOTTOM DEPTH	0.3	0.3	0.3	NA	NA	NA	NA	0.33	NA	0.33	NA	0.33	NA	NA
UNITS	MG/KG	MG/KG	MG/KG	UG/L	UG/L	UG/L	UG/L	MG/KG	UG/L	MG/KG	UG/L	MG/KG	UG/L	UG/L
EXPLOSIVES														
1,3,5-TRINITROBENZENE	0.25 U	--	0.25 U	0.25 U	--	--	--	--	--	--	--	--	0.24 U	0.255 U
1,3-DINITROBENZENE	0.25 U	--	0.25 U	0.25 U	--	--	--	--	--	--	--	--	0.24 U	0.255 U
2,2',6,6'-TETRANITRO-4,4'-AZOXYTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	0.25 U	--	0.25 U	0.25 U	--	--	--	--	--	--	--	--	0.24 U	0.255 U
2,4-DIAMINO-6-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	0.25 U	--	0.25 U	0.25 U	--	--	--	--	--	--	--	--	0.24 U	0.255 U
2,6-DIAMINO-4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	0.25 U	--	0.25 U	0.25 U	--	--	--	--	--	--	--	--	0.24 U	0.255 U
2-AMINO-4,6-DINITROTOLUENE	0.25 U	--	0.25 U	0.25 U	--	--	--	--	--	--	--	--	0.29 J	0.28 J
2-NITROTOLUENE	0.25 U	--	0.25 U	0.25 U	--	--	--	--	--	--	--	--	0.24 U	0.255 U
3,5-DINITROANILINE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-NITROTOLUENE	0.25 U	--	0.25 U	0.25 U	--	--	--	--	--	--	--	--	0.24 U	0.255 U
4-AMINO-2,6-DINITROTOLUENE	0.25 U	--	0.25 U	0.25 U	--	--	--	--	--	--	--	--	0.63	0.61
4-NITROTOLUENE	0.25 U	--	0.25 U	0.25 U	--	--	--	--	--	--	--	--	0.24 U	0.255 U
DNX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMX	0.25 U	--	0.25 U	0.32 J	--	--	--	--	--	--	--	--	4.8	4.6
MNX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	0.25 U	--	0.25 U	0.25 U	--	--	--	--	--	--	--	--	0.24 U	0.255 U
PICRAMIC ACID	--	--	0.022 U	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	0.022 U	--	--	--	--	--	--	--	--	--	--	--
RDX	0.25 U	--	0.25 U	0.25 U	--	--	--	--	--	--	--	--	24	23
TETRYL	0.25 U	--	0.25 U	0.25 U	--	--	--	--	--	--	--	--	0.24 U	0.255 U
TNX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS														
1,1,1,2-TETRACHLOROETHANE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
1,1,1-TRICHLOROETHANE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
1,1,2,2-TETRACHLOROETHANE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 UJ	0.3 U	--
1,1,2-TRICHLOROETHANE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
1,1-DICHLOROETHANE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
1,1-DICHLOROETHENE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
1,2,3-TRICHLOROPROPANE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 UJ	0.3 U	--
1,2-DIBROMO-3-CHLOROPROPANE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 UJ	0.3 U	--
1,2-DIBROMOETHANE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
1,2-DICHLOROETHANE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
1,2-DICHLOROPROPANE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
1,4-DIOXANE	0.113 U	0.000158 U	--	50 U	50 U	50 U	50 U	0.165 U	50 U	0.117 U	50 U	0.137 UJ	50 U	--
2-BUTANONE	0.0011 U	0.00158 U	--	0.5 U	0.5 U	0.5 U	0.5 U	0.00149 U	0.5 U	0.00112 U	0.5 U	0.0014 U	0.5 U	--
2-HEXANONE	0.0011 U	0.00158 U	--	0.5 U	0.5 U	0.5 U	0.5 U	0.00149 U	0.5 U	0.00112 U	0.5 U	0.0014 U	0.5 U	--
3-CHLOROPROPENE	0.0011 U	0.00158 U	--	0.5 U	0.5 U	0.5 U	0.5 U	0.00149 U	0.5 U	0.00112 U	0.5 U	0.0014 U	0.5 U	--
4-METHYL-2-PENTANONE	0.0011 U	0.00158 U	--	0.5 U	0.5 U	0.5 U	0.5 U	0.00149 U	0.5 U	0.00112 U	0.5 U	0.0014 U	0.5 U	--
ACETONE	0.0011 UJ	0.069 J	--	0.5 U	0.5 U	0.5 U	2.8 J	0.007 BU	0.5 UJ	0.035 BJ	0.5 J	0.01 BU	0.5 U	--
ACETONITRILE	0.0453 U	0.0631 U	--	20 U	20 U	20 U	20 U	0.066 U	20 U	0.0469 U	20 U	0.055 UJ	20 U	--
ACROLEIN	0.0011 UR	0.00158 UR	--	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.00149 UR	0.5 UR	0.00112 UR	0.5 UR	0.0014 UR	0.5 UR	--
ACRYLONITRILE	0.0011 U	0.00158 U	--	0.5 U	0.5 U	0.5 U	0.5 U	0.00149 U	0.5 U	0.00112 U	0.5 U	0.0014 U	0.5 U	--
BENZENE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
BROMODICHLOROMETHANE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
BROMOFORM	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
BROMOMETHANE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
CARBON DISULFIDE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
CARBON TETRACHLORIDE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
CHLOROBENZENE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
CHLORODIBROMOMETHANE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
CHLOROETHANE	0.0011 U	0.00158 U	--	0.5 U	0.5 U	0.5 U	0.5 U	0.00149 U	0.5 U	0.00112 U	0.5 U	0.0014 U	0.5 U	--
CHLOROFORM	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
CHLOROMETHANE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
CHLOROPRENE	0.0011 U	0.00158 U	--	0.5 U	0.5 U	0.5 U	0.5 U	0.00149 U	0.5 U	0.00112 U	0.5 U	0.0014 U	0.5 U	--
CIS-1,2-DICHLOROETHENE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	3.4	0.0014 U	0.3 U	--
CIS-1,3-DICHLOROPROPENE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
DIBROMOMETHANE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
DICHLORODIFLUOROMETHANE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 UJ	0.3 U	0.002 J	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 UJ	--
ETHYL METHACRYLATE	0.0011 U	0.00158 U	--	0.5 U	0.5 U	0.5 U	0.5 U	0.00149 U	0.5 U	0.00112 U	0.5 U	0.0014 U	0.5 U	--
ETHYLBENZENE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
ISOBUTANOL	0.0453 U	0.0631 U	--	20 U	20 U	20 U	20 U	0.066 U	20 U	0.0469 U	20 U	0.055 UJ	20 U	--
METHACRYLONITRILE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
METHYL IODIDE	0.0011 UJ	0.00158 UJ	--	0.5 U	0.5 U	0.5 U	0.5 U	0.00149 U	0.5 U	0.00112 U	0.5 U	0.0014 U	0.5 U	--
METHYL METHACRYLATE	0.0011 U	0.00158 U	--	0.5 U	0.5 U	0.5 U	0.5 U	0.00149 U	0.5 U	0.00112 U	0.5 U	0.0014 U	0.5 U	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	0.0011 UJ	0.006 BU	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 UJ	0.004 BU	0.3 UJ	0.006 BU	0.3 U	--
PROPIONITRILE	0.0453 U	0.0631 U	--	20 U	20 U	20 U	20 U	0.066 U	20 U	0.0469 U	20 U	0.055 UJ	20 U	--
STYRENE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
TETRACHLOROETHENE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
TOLUENE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
TOTAL XYLENES	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
TRANS-1,2-DICHLOROETHENE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
TRANS-1,3-DICHLOROPROPENE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
TRANS-1,4-DICHLORO-2-BUTENE	0.0011 U	0.00158 U	--	0.5 U	0.5 U	0.5 U	0.5 U	0.00149 U	0.5 U	0.00112 U	0.5 U	0.0014 UJ	0.5 U	--
TRICHLOROETHENE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.8 J	0.00149 U	1.3	0.00112 U	26	0.019	0.3 U	--
TRICHLOROFLUOROMETHANE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--
VINYL ACETATE	0.0011 U	0.00158 U	--	0.5 U	0.5 U	0.5 U	0.5 U	0.00149 U	0.5 U	0.00112 U	0.5 U	0.0014 U	0.5 U	--
VINYL CHLORIDE	0.0011 U	0.00158 U	--	0.3 U	0.3 U	0.3 U	0.3 U	0.00149 U	0.3 U	0.00112 U	0.3 U	0.0014 U	0.3 U	--

TABLE A.2-4
SURFACE WATER AND SEDIMENT SAMPLE ANALYTICAL RESULTS FOR EXPLOSIVES AND VOLATILE ORGANIC COMPOUNDS FOR SWMU 16
NSA CRANE, CRANE, INDIANA

LOCATION	16SW/SD30	16SW/SD30	16SW/SD30	16SW/SD30	16SW/SD30	16SW/SD30	16SW/SD30	16SW/SD30	16SW/SD30	16SW/SD30	16SW/SD30
SAMPLE ID	16SD3001	16SD3001-D	16SW3002	16SW3002-D	16SW3003	16SW3003-D	16SW3004	16SW3004-D	16SW3006	16SW3006-D	16SW3007
SAMPLE DATE	20041008	20041008	20050203	20050203	20050508	20050508	20060105	20060105	20060504	20060504	20070501
ROUND	03	03	04	04	05	05	07	07	08	08	09
EVENT [(1)]	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY	GULLY
SAMPLE CODE	NORMAL	DUP	NORMAL	DUP	NORMAL	DUP	NORMAL	DUP	NORMAL	DUP	NORMAL
MATRIX	SD	SD	SW	SW	SW	SW	SW	SW	SW	SW	SW
TOP DEPTH	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOTTOM DEPTH	0.33	0.33	NA	NA	NA	NA	NA	NA	NA	NA	NA
UNITS	MG/KG	MG/KG	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
EXPLOSIVES											
1,3,5-TRINITROBENZENE	--	--	0.245 U	0.248 U	0.25 U	0.24 U	0.266 U	0.242 U	0.25 U	0.25 U	0.26 U
1,3-DINITROBENZENE	--	--	0.245 U	0.248 U	0.25 U	0.24 U	0.266 U	0.242 U	0.25 U	0.25 U	0.26 U
2,2',6,6'-TETRANITRO-4,4'-AZOXYTOLUENE	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRINITROTOLUENE	--	--	0.245 U	0.248 U	0.25 U	0.24 U	0.266 U	0.242 U	0.25 U	0.25 U	0.26 U
2,4-DIAMINO-6-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	0.245 U	0.248 U	0.25 U	0.24 U	0.266 U	0.242 U	0.25 U	0.25 U	0.26 U
2,6-DIAMINO-4-NITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	0.245 U	0.248 U	0.25 U	0.24 U	0.266 U	0.242 U	0.25 U	0.25 U	0.26 U
2-AMINO-4,6-DINITROTOLUENE	--	--	0.245 U	0.248 U	0.39 J	0.38 J	0.28 J	0.29 J	0.25 U	0.25 U	0.26 U
2-NITROTOLUENE	--	--	0.245 U	0.248 U	0.25 U	0.24 U	0.266 U	0.242 U	0.25 U	0.25 U	0.26 U
3,5-DINITROANILINE	--	--	--	--	--	--	--	--	--	--	--
3-NITROTOLUENE	--	--	0.245 U	0.248 U	0.25 U	0.24 U	0.266 U	0.242 U	0.25 U	0.25 U	0.26 U
4-AMINO-2,6-DINITROTOLUENE	--	--	0.44 J	0.44 J	0.76	0.75	0.55	0.55	0.94	0.93	0.26 U
4-NITROTOLUENE	--	--	0.245 U	0.248 U	0.25 U	0.24 U	0.266 U	0.242 U	0.25 U	0.25 U	0.26 U
DNX	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	3.6	3.4	4.4	4.2	4.6 J	4.4 J	4.9	4.8	0.26 U
MNX	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	0.245 U	0.248 U	0.25 U	0.24 U	0.266 U	0.242 U	0.25 U	0.25 U	0.26 U
PICRAMIC ACID	--	--	--	--	--	--	--	--	--	--	--
PICRIC ACID	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	14	13	13	13	19	19	18	17	0.26 U
TETRYL	--	--	0.245 U	0.248 U	0.25 U	0.24 U	0.266 U	0.242 U	0.25 U	0.25 U	0.26 U
TNX	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS											
1,1,1,2-TETRACHLOROETHANE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,1-TRICHLOROETHANE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2,2-TETRACHLOROETHANE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2-TRICHLOROETHANE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHANE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHENE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2,3-TRICHLOROPROPANE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DIBROMO-3-CHLOROPROPANE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DIBROMOETHANE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROETHANE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-DICHLOROPROPANE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-DIOXANE	0.0948 U	0.0975 U	--	--	--	--	--	--	--	--	--
2-BUTANONE	0.000948 U	0.000975 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-HEXANONE	0.000948 U	0.000975 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
3-CHLOROPROPENE	0.000948 U	0.000975 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-METHYL-2-PENTANONE	0.000948 U	0.000975 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ACETONE	0.002 BU	0.000975 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U
ACETONITRILE	0.0379 U	0.039 U	--	--	--	--	--	--	--	--	--
ACROLEIN	0.000948 UR	0.000975 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U	0.5 U	0.5 UR
ACRYLONITRILE	0.000948 U	0.000975 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BENZENE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMODICHLOROMETHANE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMOFORM	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
BROMOMETHANE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CARBON DISULFIDE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CARBON TETRACHLORIDE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROBENZENE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLORODIBROMOMETHANE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROETHANE	0.000948 U	0.000975 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROMETHANE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CHLOROPRENE	0.000948 U	0.000975 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CIS-1,3-DICHLOROPROPENE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
DIBROMOMETHANE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
DICHLORODIFLUOROMETHANE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 UJ	0.3 U	0.3 U	0.3 UJ
ETHYL METHACRYLATE	0.000948 U	0.000975 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
ISOBUTANOL	0.0379 U	0.039 U	--	--	--	--	--	--	--	--	--
METHACRYLONITRILE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	3 U
METHYL IODIDE	0.000948 U	0.000975 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL METHACRYLATE	0.000948 U	0.000975 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYLENE CHLORIDE	0.000948 UJ	0.003 BU	0.3 U	0.3 U	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 U	0.3 U	0.3 U
PROPIONITRILE	0.0379 U	0.039 U	--	--	--	--	--	--	--	--	--
STYRENE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TETRACHLOROETHENE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TOLUENE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TOTAL XYLENES	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,2-DICHLOROETHENE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,3-DICHLOROPROPENE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,4-DICHLORO-2-BUTENE	0.000948 U	0.000975 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRICHLOROFLUOROMETHANE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
VINYL ACETATE	0.000948 U	0.000975 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VINYL CHLORIDE	0.000948 U	0.000975 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U

APPENDIX B

CALCULATIONS AND COST ESTIMATES

APPENDIX B.1

CALCULATIONS

SWMU 16, NSA Crane
Projection of Groundwater Cleanup Timeframe

A projection of the time required for contaminant concentrations to decline to MCLs was performed for SWMU 16 to support the evaluation of remedial alternatives for the site. Groundwater has been impacted by various compounds, primarily VOCs. The projection was based on the time required for TCE to decline to its MCL of 5 ug/l, as TCE is the compound found at the highest concentrations at the site.

There is limited sampling data available for groundwater, and most of it is from 2007 or earlier which is before the most recent soil removal activities performed in 2013-2014, thus projections based on concentration trends over time cannot be made. The TCE concentration from well 16MWT06 was used as the starting concentration, as TCE concentrations in this well are the highest by far of any wells at the site. The well is also close to one of the former Eastern Settling Basin, which has been removed. Based on a review of TCE concentrations in this well, a starting point concentration of 500,000 ug/l was assumed for cleanup projection purposes. Although not the highest/most recent concentration measured in this well, it appears to be a reasonable average based on the range of concentrations observed and the lack of any trend through 2007 (the most recent sampling round). The presence of TCE at the concentrations observed strongly indicates the probable presence of DNAPL in the immediate vicinity of the well, which could have been released from the nearby settling basin. Because of the strong likelihood of DNAPL, the cleanup trend projection was made using source mass depletion calculations that take into account the presence of DNAPL. For these calculations, it is assumed that the ratio of source mass to groundwater concentration remains constant, i.e. the system is in equilibrium - as the mass is depleted over time the groundwater concentrations also decline proportionally. An assumed NAPL mass of 800 kg (approximately 200 gallons) was assumed to be present. It was also assumed that some biodegradation is occurring based on the presence of TCE breakdown products (DCE, VC), with a conservatively long half-life of 10 years assigned.

Based on the attached calculations, a 73 year timeframe was estimated for TCE concentrations to drop to the MCL assuming that no active remedial measures are taken to try to accelerate the rate of cleanup, beyond the soil removals performed in 2013-2014.

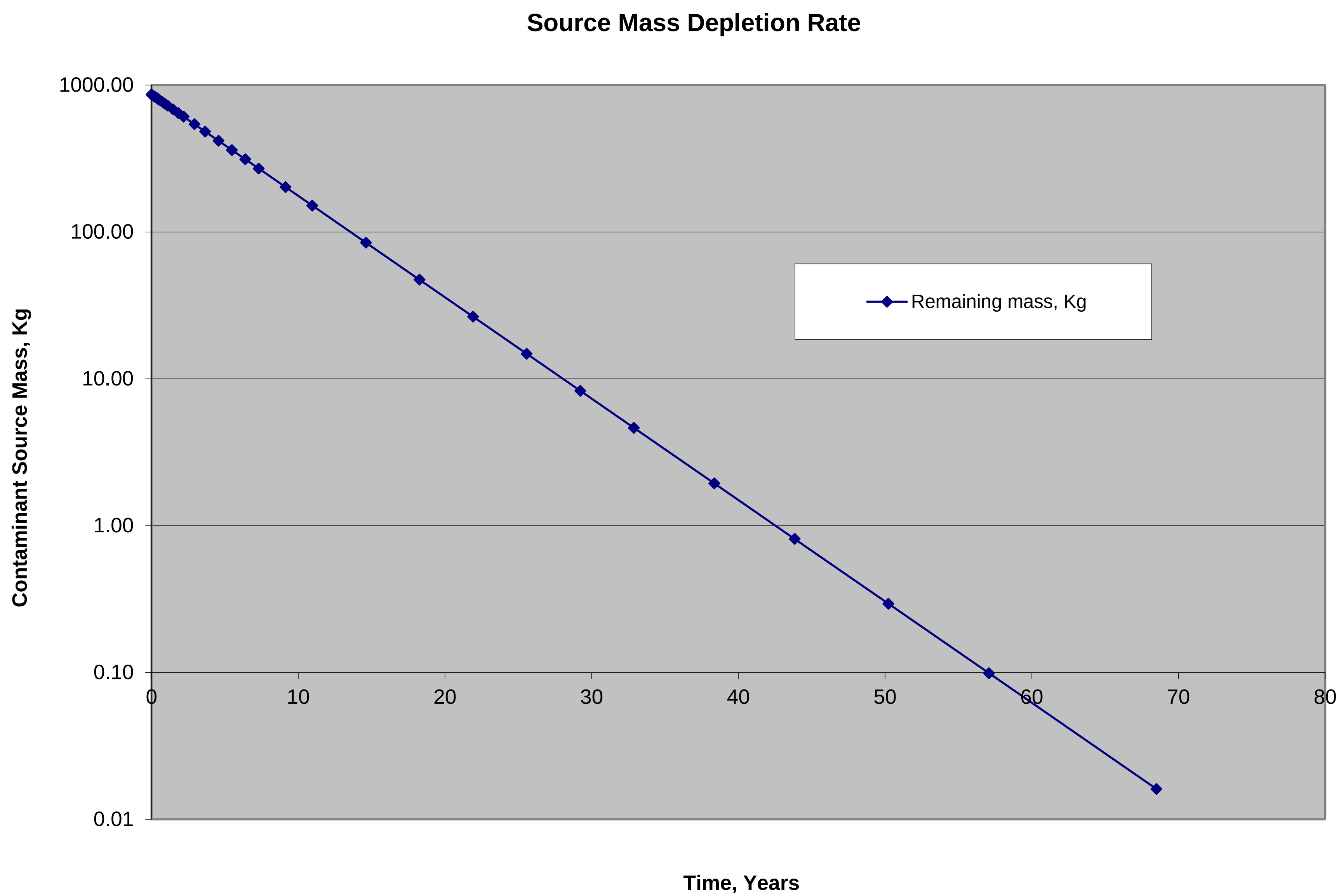
SOURCE MASS DEPLETION CALCULATIONS

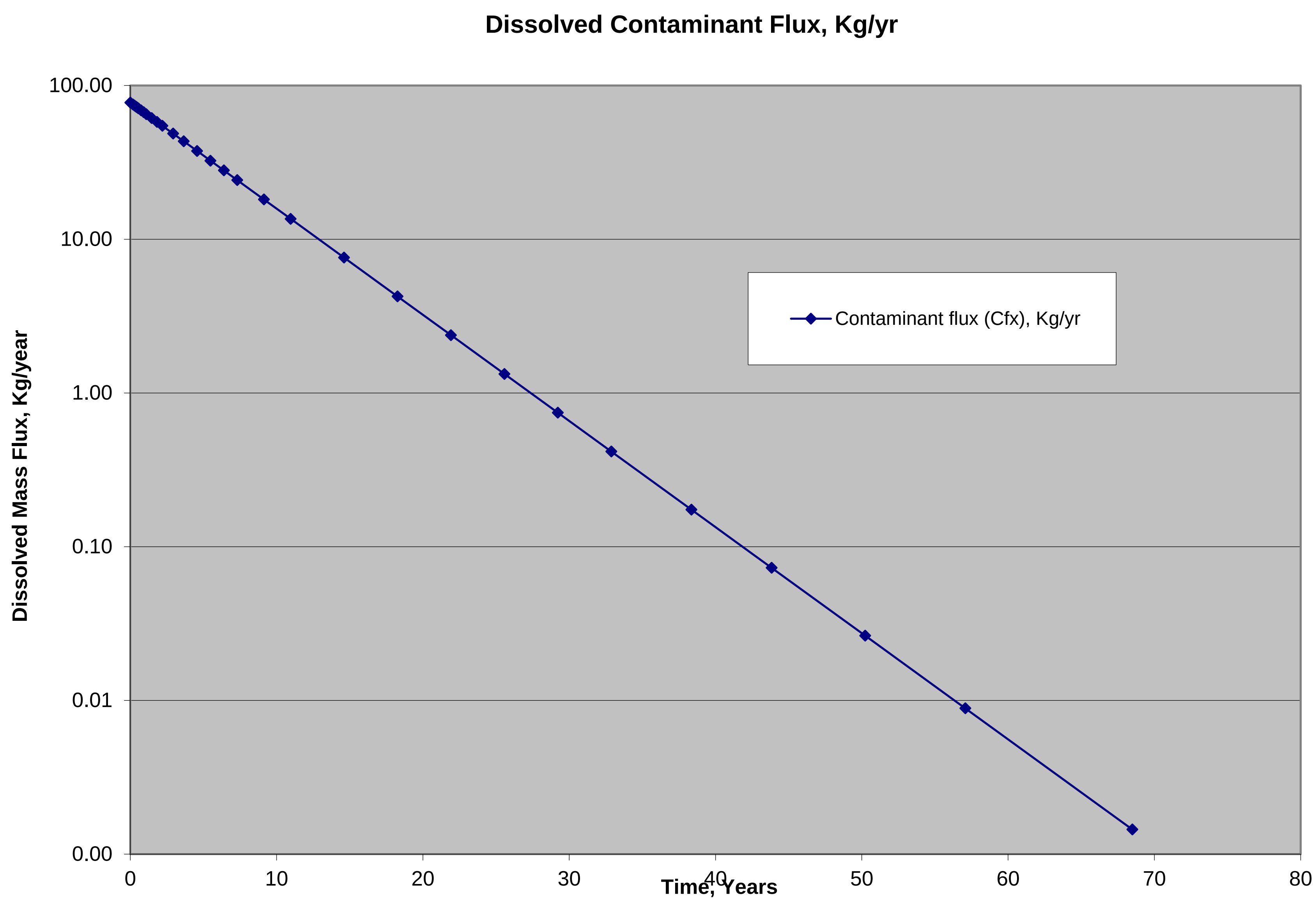
SITE: SWMU 16 **LOCATION:** NSA CRANE, INDIANA **DATE:** 10/9/2015
PROJECT NO: 112G03588 **BY:** J ORIENT

Source zone width	50	ft
Source zone length	50	ft
Source zone thickness	10	ft
Aquifer K	1.50	ft/day
GW flow gradient	0.02	
foc	0.00050	
porosity	0.005	
GW flux	15.000	ft3/day
GW flux	424.677	L/day
Source area volume	25000.00	ft3
	707.92	m3
	707921.2	L
Time required for 1 pore volume flush from source zone	0.023	years
Contaminant of concern	TCE	
Contaminant Koc	136	L/Kg
Solubility limit	1100	mg/L
Avg contaminant conc. in GW	500	mg/L
Dissolved contaminant flux in groundwater, CFx	212338.5	mg/day
	77.504	Kg/yr
Specific gravity of solids	2.65	Kg/L
Sorbed solids conc @ equilibrium	34.00	mg/Kg
Source area sorbed mass @ equilibrium	63.465	Kg
Percent of source area volume @ equilibrium concentration	100	%
Sorbed mass in source zone	63.465	Kg
Source zone mass, NAPL	800	Kg
Total, NAPL mass plus sorbed mass, Sm	863.46	Kg
Dissolved mass in groundwater	1.770	Kg
Source mass depletion constant, Cfx/Sm	0.089759	1/yr

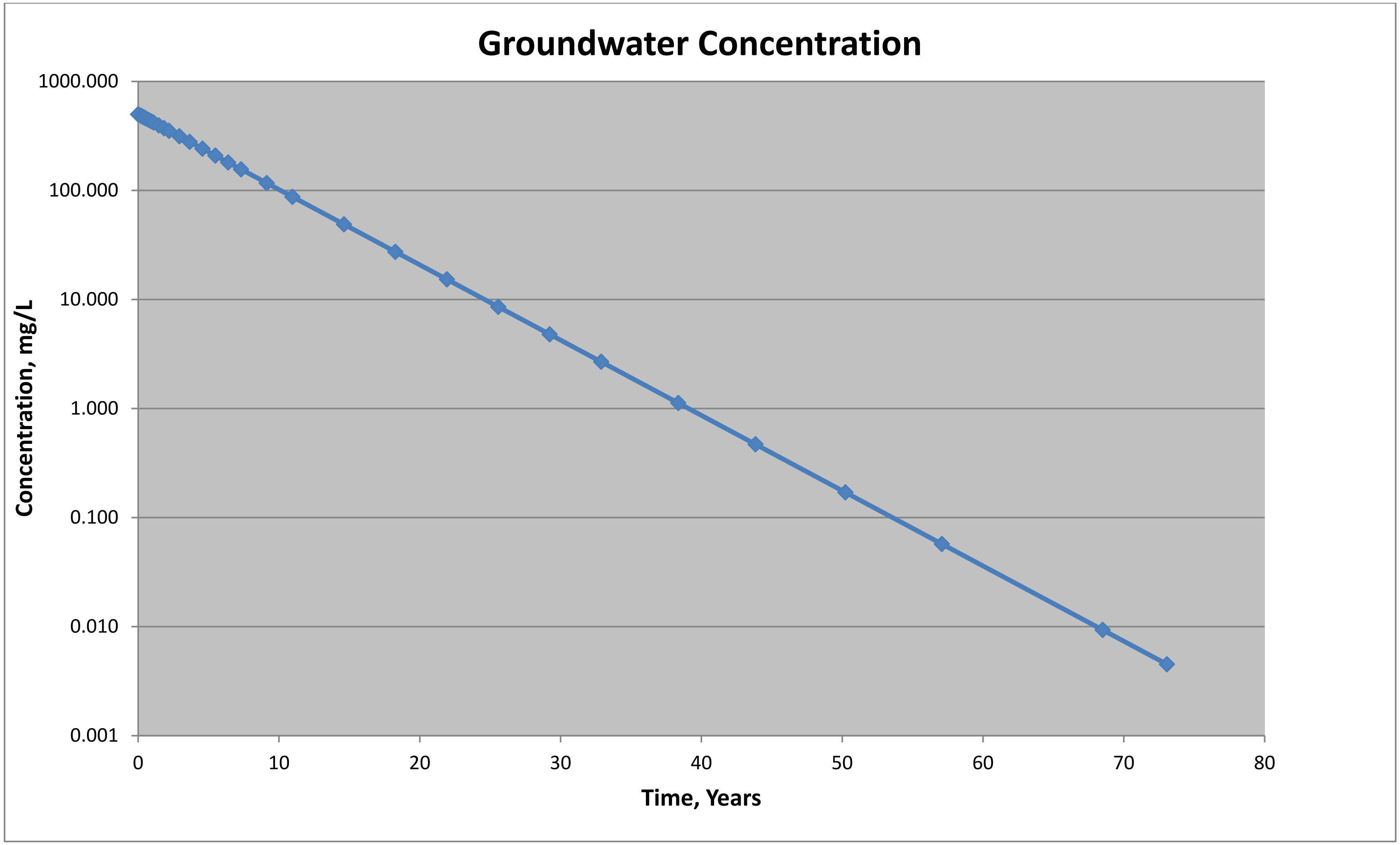
Time period	Source mass (Sm), Kg	Contaminant flux (Cfx), Kg/yr	Avg GW Conc., mg/L	Sorbed mass on soils, Kg	Remaining DNAPL, Kg	Time, years
0	863.46	77.50	500.000	63.46	800.00	0
8	838.75	75.29	485.690	61.65	777.10	0.18
12	826.66	74.20	478.690	60.76	765.90	0.27
16	814.75	73.13	471.790	59.88	754.86	0.37
20	803.01	72.08	464.990	59.02	743.98	0.46
24	791.43	71.04	458.288	58.17	733.26	0.55
32	768.78	69.00	445.172	56.51	712.28	0.73
40	746.78	67.03	432.432	54.89	691.89	0.91
48	725.41	65.11	420.056	53.32	672.09	1.10
64	684.48	61.44	396.357	50.31	634.17	1.46
80	645.86	57.97	373.995	47.47	598.39	1.83
96	609.42	54.70	352.894	44.79	564.63	2.19
128	542.60	48.70	314.197	39.88	502.72	2.92
160	483.10	43.36	279.744	35.51	447.59	3.65
200	417.81	37.50	241.940	30.71	387.10	4.57
240	361.35	32.43	209.246	26.56	334.79	5.48
280	312.52	28.05	180.969	22.97	289.55	6.39
320	270.29	24.26	156.513	19.87	250.42	7.31
400	202.17	18.15	117.070	14.86	187.31	9.13
480	151.22	13.57	87.567	11.11	140.11	10.96
640	84.61	7.59	48.993	6.22	78.39	14.61
800	47.34	4.25	27.411	3.48	43.86	18.26
960	26.48	2.38	15.336	1.95	24.54	21.92
1120	14.82	1.33	8.580	1.09	13.73	25.57
1280	8.29	0.74	4.801	0.61	7.68	29.22
1440	4.64	0.42	2.686	0.34	4.30	32.88
1680	1.94	0.17	1.124	0.14	1.80	38.36
1920	0.81	0.07	0.470	0.06	0.75	43.84
2200	0.29	0.03	0.170	0.02	0.27	50.23
2500	0.10	0.01	0.057	0.01	0.09	57.08
3000	0.02	0.00	0.009	0.00	0.01	68.49
3200	0.01	0.00	0.005	0.00	0.01	73.06

Is contaminant decay occurring in the source zone? (yes/no):	yes	**If yes, estimate contaminant half-life (years):**	10.00
First-order decay coefficient (k):	0.0693		


Source Mass Depletion Rate
1000.00
100.00
10.00
1.00
0.10
0.01
0
10
20
30
40
50
60
70
80
Remaining mass, Kg
Contaminant Source Mass, Kg
Time, Years



Dissolved Contaminant Flux, Kg/yr
100.00
10.00
1.00
0.10
0.01
0.00
0
10
20
30
40
50
60
70
80
Time, Years
Dissolved Mass Flux, Kg/year
Contaminant flux (Cfx), Kg/yr


Groundwater Concentration
Concentration, mg/L
1000.000
100.000
10.000
1.000
0.100
0.010
0.001
0
10
20
30
40
50
60
70
80
Time, Years

Formulas Used

Groundwater flux = Source zone width x source zone thickness x K x flow gradient

Contaminant flux = groundwater flux x avg groundwater concentration

Source area volume = source area width x length x thickness

Sorbed solids conc. @ equilibrium = koc x foc x solubility limit

Source area sorbed mass @ equilibrium = Source area volume x (1-porosity) x SG x equilibirum solids concentration

Estimated sorbed mass in source = Source area sorbed mass @ equilibrium x the % of the source volume at equilibrium

Contaminant flux @ year n = Initial contaminant flux rate x (1-source mass depletion constant)^{n}

Remaining source mass @ year n = contaminant flux @ year n / source depletion constant

APPENDIX B.2

COST ESTIMATES FOR ALTERNATIVES

Item	Quantity	Unit	Unit Cost Subcontract	Unit Cost Material	Unit Cost Labor	Unit Cost Equipment	Extended Cost Subcontract	Extended Cost Material	Extended Cost Labor	Extended Cost Equipment	Subtotal
1 PROJECT PLANNING & DOCUMENTS											
1.1 Prepare CMIP	150	hr			$40.00		$0	$0	$6,000	$0	$6,000
1.2 Prepare QAPP	500	hr			$40.00		$0	$0	$20,000	$0	$20,000
Subtotal							$0	$0	$26,000	$0	$26,000
Overhead on Labor Cost @ 30%									$7,800		$7,800
G & A on Labor, Material, Equipment, & Subs Cost @ 10%							$0	$0	$2,600	$0	$2,600
Tax on Materials and Equipment Cost @ 7%								$0		$0	$0
Total Direct Cost							$0	$0	$36,400	$0	$36,400
Indirects on Total Direct Cost @ 0%											$0
Profit on Total Direct Cost @ 10%											$3,640
Subtotal											$40,040
Health & Safety Monitoring @ 0%											$0
Total Field Cost											$40,040
Contingency on Total Field Costs @ 20%											$8,008
Engineering on Total Field Cost @ 0%											$0
TOTAL CAPITAL COST											**$48,048**

NSA CRANE
Crane, Indiana
SWMU 16 CMS
Alternative 2: MNA and LUCs
Annual Cost

12/29/2015 10:49 AM

Item	Item Cost yearly	Item Cost Year 1	Item Cost every 2 years	Item Cost every 7 years	Notes
Site Inspection: Visit	$1,210				One-day visit to verify LUC RD
Site Inspection: Report	$1,500				
Groundwater Sampling			$9,300		Labor and supplies to collect 11 groundwater samples and 4 surface water samples using a crew of two for each event.
Water Analysis			$18,400		Analyze water samples for VOCs and natural attenuation parameters.
Water Sampling Report			$9,200		
Air Monitoring with Report		$40,000		$20,000	Year 1 includes 2 rounds of sampling, every 7 years 1 round for VOCs
Site Review				$30,000	Seven-Year Site Reviews
Subtotal	$2,710	$40,000	$36,900	$50,000	
Contingency @ 10%	$271	$4,000	$3,690	$5,000	
TOTAL	**$2,981**	**$44,000**	**$40,590**	**$55,000**	

NSA CRANE
Crane, Indiana
SWMU 16 CMS
Alternative 2: MNA and LUCs
Present Worth Analysis

Year	Capital Cost	Annual Cost	Total Year Cost	Annual Discount Rate 1.4%	Yearly Present Worth	Total Present Worth
0	$48,048		$48,048	1.000	$48,048	
1		$46,981	$46,981	0.986	$46,332	
2		$43,571	$43,571	0.973	$42,376	
3		$2,981	$2,981	0.959	$2,859	
4		$43,571	$43,571	0.946	$41,214	
5		$2,981	$2,981	0.933	$2,781	
6		$43,571	$43,571	0.920	$40,084	
7		$57,981	$57,981	0.907	$52,604	
8		$43,571	$43,571	0.895	$38,985	
9		$2,981	$2,981	0.882	$2,630	
10		$43,571	$43,571	0.870	$37,916	
11		$2,981	$2,981	0.858	$2,558	
12		$43,571	$43,571	0.846	$36,876	
13		$2,981	$2,981	0.835	$2,488	
14		$98,571	$98,571	0.823	$81,137	
15		$2,981	$2,981	0.812	$2,420	
16		$43,571	$43,571	0.801	$34,881	
17		$2,981	$2,981	0.790	$2,354	
18		$43,571	$43,571	0.779	$33,925	
19		$2,981	$2,981	0.768	$2,289	
20		$43,571	$43,571	0.757	$32,994	
21		$57,981	$57,981	0.747	$43,300	
22		$43,571	$43,571	0.736	$32,089	
23		$2,981	$2,981	0.726	$2,165	
24		$43,571	$43,571	0.716	$31,209	
25		$2,981	$2,981	0.706	$2,106	
26		$43,571	$43,571	0.697	$30,354	
27		$2,981	$2,981	0.687	$2,048	
28		$98,571	$98,571	0.678	$66,786	
29		$2,981	$2,981	0.668	$1,992	
30		$43,571	$43,571	0.659	$28,712	**$828,512**
31		$2,981	$2,981	0.650	$1,937	
32		$43,571	$43,571	0.641	$27,924	
33		$2,981	$2,981	0.632	$1,884	
34		$43,571	$43,571	0.623	$27,159	
35		$57,981	$57,981	0.615	$35,642	

Year	Capital Cost	Annual Cost	Total Year Cost	Annual Discount Rate 1.4%	Yearly Present Worth	Total Present Worth
36		$43,571	$43,571	0.606	$26,414	
37		$2,981	$2,981	0.598	$1,782	
38		$43,571	$43,571	0.590	$25,689	
39		$2,981	$2,981	0.581	$1,733	
40		$43,571	$43,571	0.573	$24,985	
41		$2,981	$2,981	0.566	$1,686	
42		$98,571	$98,571	0.558	$54,974	
43		$2,981	$2,981	0.550	$1,640	
44		$43,571	$43,571	0.542	$23,633	
45		$2,981	$2,981	0.535	$1,595	
46		$43,571	$43,571	0.528	$22,985	
47		$2,981	$2,981	0.520	$1,551	
48		$43,571	$43,571	0.513	$22,355	
49		$57,981	$57,981	0.506	$29,338	
50		$43,571	$43,571	0.499	$21,742	**$1,185,160**
51		$2,981	$2,981	0.492	$1,467	
52		$43,571	$43,571	0.485	$21,146	
53		$2,981	$2,981	0.479	$1,427	
54		$43,571	$43,571	0.472	$20,566	
55		$2,981	$2,981	0.465	$1,388	
56		$98,571	$98,571	0.459	$45,251	
57		$2,981	$2,981	0.453	$1,350	
58		$43,571	$43,571	0.446	$19,453	
59		$2,981	$2,981	0.440	$1,313	
60		$43,571	$43,571	0.434	$18,920	
61		$2,981	$2,981	0.428	$1,277	
62		$43,571	$43,571	0.422	$18,401	
63		$57,981	$57,981	0.416	$24,149	
64		$43,571	$43,571	0.411	$17,897	
65		$2,981	$2,981	0.405	$1,208	
66		$43,571	$43,571	0.399	$17,406	
67		$2,981	$2,981	0.394	$1,174	
68		$43,571	$43,571	0.389	$16,928	
69		$2,981	$2,981	0.383	$1,142	
70		$98,571	$98,571	0.378	$37,247	

NSA CRANE
Crane, Indiana
SWMU 16 CMS
Alternative 2: MNA and LUCs
Present Worth Analysis

Year	Capital Cost	Annual Cost	Total Year Cost	Annual Discount Rate 1.4%	Yearly Present Worth	Total Present Worth
71		$2,981	$2,981	0.373	$1,111	
72		$43,571	$43,571	0.368	$16,013	
73		$2,981	$2,981	0.362	$1,080	
74		$43,571	$43,571	0.357	$15,574	
75		$2,981	$2,981	0.352	$1,051	**$1,489,096**
76		$43,571	$43,571	0.348	$15,147	
77		$57,981	$57,981	0.343	$19,878	
78		$43,571	$43,571	0.338	$14,731	
79		$2,981	$2,981	0.333	$994	
80		$43,571	$43,571	0.329	$14,327	
81		$2,981	$2,981	0.324	$967	
82		$43,571	$43,571	0.320	$13,934	
83		$2,981	$2,981	0.315	$940	
84		$98,571	$98,571	0.311	$30,659	
85		$2,981	$2,981	0.307	$914	
86		$43,571	$43,571	0.303	$13,181	
87		$2,981	$2,981	0.298	$889	
88		$43,571	$43,571	0.294	$12,819	
89		$2,981	$2,981	0.290	$865	
90		$43,571	$43,571	0.286	$12,468	
91		$57,981	$57,981	0.282	$16,362	
92		$43,571	$43,571	0.278	$12,126	
93		$2,981	$2,981	0.274	$818	
94		$43,571	$43,571	0.271	$11,793	
95		$2,981	$2,981	0.267	$796	
96		$43,571	$43,571	0.263	$11,470	
97		$2,981	$2,981	0.260	$774	
98		$98,571	$98,571	0.256	$25,237	
99		$2,981	$2,981	0.252	$753	
100		$43,571	$43,571	0.249	$10,849	**$1,732,785**

NSA CRANE
Crane, Indiana
SWMU 16 CMS
Alternative 3: MNA, LUCs, and Source Reduction
Capital Cost

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Item	Quantity	Unit	Unit Cost Subcontract	Unit Cost Material	Unit Cost Labor	Unit Cost Equipment	Extended Cost Subcontract	Extended Cost Material	Extended Cost Labor	Extended Cost Equipment	Subtotal
1 PROJECT PLANNING & DOCUMENTS											
1.1 Prepare CMIP	150	hr			$40.00		$0	$0	$6,000	$0	$6,000
1.2 Prepare QAPP	500	hr			$40.00		$0	$0	$20,000	$0	$20,000
Subtotal							$0	$0	$26,000	$0	$26,000
Overhead on Labor Cost @ 30%									$7,800		$7,800
G & A on Labor, Material, Equipment, & Subs Cost @ 10%							$0	$0	$2,600	$0	$2,600
Tax on Materials and Equipment Cost @ 7%								$0		$0	$0
Total Direct Cost							$0	$0	$36,400	$0	$36,400
Indirects on Total Direct Cost @ 0%											$0
Profit on Total Direct Cost @ 10%											$3,640
Subtotal											$40,040
Health & Safety Monitoring @ 0%											$0
Total Field Cost											$40,040
Contingency on Total Field Costs @ 20%											$8,008
Engineering on Total Field Cost @ 0%											$0
TOTAL CAPITAL COST											**$48,048**

NSA CRANE
Crane, Indiana
SWMU 16 CMS
Alternative 3: MNA, LUCs, and Source Reduction
Capital Cost for Year 28

Item	Quantity	Unit	Unit Cost Subcontract	Unit Cost Material	Unit Cost Labor	Unit Cost Equipment	Extended Cost Subcontract	Extended Cost Material	Extended Cost Labor	Extended Cost Equipment	Subtotal
1 PROJECT PLANNING & DOCUMENTS											
1.1 Prepare Construction Documents, Plans, Permits	300	hr			$40.00		$0	$0	$12,000	$0	$12,000
2 MOBILIZATION AND DEMOBILIZATION											
2.1 Site Support Facilities (trailers, phone, electric, etc.)	1	ls		$1,100.00		$3,600.00	$0	$1,100	$0	$3,600	$4,700
2.2 Equipment Mobilization/Demobilization	3	ea			$456.00	$470.00	$0	$0	$1,368	$1,410	$2,778
3 FIELD SUPPORT											
3.1 Office Trailer	1	mo				$410.00	$0	$0	$0	$410	$410
3.2 Field Office Equipment, Utilities, & Support	1	mo		$520.00			$0	$520	$0	$0	$520
3.3 Storage Trailer	1	mo				$101.00	$0	$0	$0	$101	$101
3.4 Utility Connection/Disconnection (phone/electric)	0	ls	$1,250.00				$0	$0	$0	$0	$0
3.5 Construction Layout Survey	1	day	$1,950.00				$1,950	$0	$0	$0	$1,950
3.6 Site Superintendent	20	day		$140.00	$432.70		$0	$2,800	$8,654	$0	$11,454
3.7 Site Health & Safety and QA/QC	20	day		$140.00	$384.60		$0	$2,800	$7,692	$0	$10,492
3.8 Underground Utility Clearance	1	ls	$7,500.00				$7,500	$0	$0	$0	$7,500
4 DECONTAMINATION											
4.1 Decontamination Services	1	mo		$1,225.00	$2,400.00	$1,650.00	$0	$1,225	$2,400	$1,650	$5,275
4.2 Temporary Equipment Decon Pad	1	ls		$2,400.00	$1,370.00	$1,050.00	$0	$2,400	$1,370	$1,050	$4,820
4.3 Decon Water	1,000	gal		$0.20			$0	$200	$0	$0	$200
4.4 Decon Water Storage Tank, 6,000 gallon	1	mo				$790.00	$0	$0	$0	$790	$790
4.5 Clean Water Storage Tank, 4,000 gallon	1	mo				$705.00	$0	$0	$0	$705	$705
4.6 Disposal of Decon Waste (liquid & solid)	1	mo	$1,020.00				$1,020	$0	$0	$0	$1,020
5 EXCAVATION AND DISPOSAL											
5.1 Excavator, 2.0 cy	15	day			$376.40	$1,175.00	$0	$0	$5,646	$17,625	$23,271
5.2 Dozer, 140 hp	15	day			$376.40	$866.00	$0	$0	$5,646	$12,990	$18,636
5.3 Compactor, 240 hp	5	day			$376.40	$1,206.00	$0	$0	$1,882	$6,030	$7,912
5.4 Compactor, 35 hp	5	day				$236.80	$0	$0	$0	$1,184	$1,184
5.5 Site Labor, (2 laborers)	30	day			$291.36		$0	$0	$8,741	$0	$8,741
5.6 T & D of Excavated Soil, non-hazardous	4,000	ton	$85.00				$340,000	$0	$0	$0	$340,000
5.7 Waste Disposal Characterization / Analytical	7	ea	$1,200.00	$30.00	$75.00	$40.00	$8,400	$210	$525	$280	$9,415
5.8 Backfill, common fill	2,480	cy		$22.00			$0	$54,560	$0	$0	$54,560
5.9 Backfill, topsoil	220	cy		$35.00			$0	$7,700	$0	$0	$7,700
5.10 Revegetation, seed	18	msf	$68.00				$1,224	$0	$0	$0	$1,224
6 POST CONSTRUCTION DOCUMENTS											
6.1 Completion Report	100	hr			$40.00		$0	$0	$4,000	$0	$4,000
Subtotal							$360,094	$73,515	$59,924	$47,825	$541,358
Overhead on Labor Cost @ 30%									$17,977		$17,977
G & A on Labor, Material, Equipment, & Subs Cost @ 10%							$36,009	$7,352	$5,992	$4,783	$54,136
Tax on Materials and Equipment Cost @ 7%								$5,146		$3,348	$8,494
Total Direct Cost							$396,103	$86,013	$83,893	$55,955	$621,965

Item	Quantity	Unit	Unit Cost Subcontract	Unit Cost Material	Unit Cost Labor	Unit Cost Equipment	Extended Cost Subcontract	Extended Cost Material	Extended Cost Labor	Extended Cost Equipment	Subtotal
Indirects on Total Direct Cost @ 15%		(excluding transportation and disposal cost)									$42,142
Profit on Total Direct Cost @ 10%											$62,196
Subtotal											$726,303
Health & Safety Monitoring @ 1%											$7,263
Total Field Cost											$733,566
Contingency on Total Field Costs @ 20%											$146,713
Engineering on Total Field Cost @ 10%											$73,357
TOTAL CAPITAL COST											**$953,635**

NSA CRANE
Crane, Indiana
SWMU 16 CMS
Alternative 3: MNA, LUCs, and Source Reduction
Annual Cost

Item	Item Cost yearly	Item Cost Year 1	Item Cost every 2 years	Item Cost every 7 years to year 28	Item Cost every 7 years year 35 to 75	Notes
Site Inspection: Visit	$1,210					One-day visit to verify LUC RD
Site Inspection: Report	$1,500					
Groundwater Sampling			$9,300			Labor and supplies to collect 11 groundwater samples and 4 surface water samples using a crew of two for each event.
Water Analysis			$18,400			Analyze water samples for VOCs and natural attenuation parameters.
Water Sampling Report			$9,200			
Air Monitoring with Report		$40,000		$20,000		Sampling for VOCs. Year 1 includes two rounds of sampling. Years 7, 14, 21, and 28, one round. Sampling completed year 28.
Site Review				$30,000	$30,000	Seven-Year Site Reviews
Subtotal	$2,710	$40,000	$36,900	$50,000	$30,000	
Contingency @ 10%	$271	$4,000	$3,690	$5,000	$3,000	
TOTAL	**$2,981**	**$44,000**	**$40,590**	**$55,000**	**$33,000**	

NSA CRANE
Crane, Indiana
SWMU 16 CMS
Alternative 3: MNA, LUCs, and Source Reduction
Present Worth Analysis

Year	Capital Cost	Annual Cost	Total Year Cost	Annual Discount Rate 1.4%	Yearly Present Worth	Total Present Worth
0	$48,048		$48,048	1.000	$48,048	
1		$46,981	$46,981	0.986	$46,332	
2		$43,571	$43,571	0.973	$42,376	
3		$2,981	$2,981	0.959	$2,859	
4		$43,571	$43,571	0.946	$41,214	
5		$2,981	$2,981	0.933	$2,781	
6		$43,571	$43,571	0.920	$40,084	
7		$57,981	$57,981	0.907	$52,604	
8		$43,571	$43,571	0.895	$38,985	
9		$2,981	$2,981	0.882	$2,630	
10		$43,571	$43,571	0.870	$37,916	
11		$2,981	$2,981	0.858	$2,558	
12		$43,571	$43,571	0.846	$36,876	
13		$2,981	$2,981	0.835	$2,488	
14		$98,571	$98,571	0.823	$81,137	
15		$57,981	$57,981	0.812	$47,067	
16		$43,571	$43,571	0.801	$34,881	
17		$2,981	$2,981	0.790	$2,354	
18		$43,571	$43,571	0.779	$33,925	
19		$2,981	$2,981	0.768	$2,289	
20		$43,571	$43,571	0.757	$32,994	
21		$57,981	$57,981	0.747	$43,300	
22		$43,571	$43,571	0.736	$32,089	
23		$2,981	$2,981	0.726	$2,165	
24		$43,571	$43,571	0.716	$31,209	
25		$2,981	$2,981	0.706	$2,106	
26		$43,571	$43,571	0.697	$30,354	
27		$2,981	$2,981	0.687	$2,048	
28	$953,635	$98,571	$1,052,206	0.678	$712,916	
29		$2,981	$2,981	0.668	$1,992	
30		$43,571	$43,571	0.659	$28,712	**$1,519,289**
31		$2,981	$2,981	0.650	$1,937	
32		$43,571	$43,571	0.641	$27,924	
33		$2,981	$2,981	0.632	$1,884	
34		$43,571	$43,571	0.623	$27,159	
35		$35,981	$35,981	0.615	$22,118	
36		$43,571	$43,571	0.606	$26,414	
37		$2,981	$2,981	0.598	$1,782	

Year	Capital Cost	Annual Cost	Total Year Cost	Annual Discount Rate 1.4%	Yearly Present Worth	Total Present Worth
38		$43,571	$43,571	0.590	$25,689	
39		$2,981	$2,981	0.581	$1,733	
40		$43,571	$43,571	0.573	$24,985	
41		$2,981	$2,981	0.566	$1,686	
42		$76,571	$76,571	0.558	$42,704	
43		$2,981	$2,981	0.550	$1,640	
44		$43,571	$43,571	0.542	$23,633	
45		$2,981	$2,981	0.535	$1,595	
46		$43,571	$43,571	0.528	$22,985	
47		$2,981	$2,981	0.520	$1,551	
48		$43,571	$43,571	0.513	$22,355	
49		$35,981	$35,981	0.506	$18,206	
50		$43,571	$43,571	0.499	$21,742	**$1,839,012**
51		$2,981	$2,981	0.492	$1,467	
52		$43,571	$43,571	0.485	$21,146	
53		$2,981	$2,981	0.479	$1,427	
54		$43,571	$43,571	0.472	$20,566	
55		$2,981	$2,981	0.465	$1,388	
56		$76,571	$76,571	0.459	$35,151	
57		$2,981	$2,981	0.453	$1,350	
58		$43,571	$43,571	0.446	$19,453	
59		$2,981	$2,981	0.440	$1,313	
60		$43,571	$43,571	0.434	$18,920	
61		$2,981	$2,981	0.428	$1,277	
62		$43,571	$43,571	0.422	$18,401	
63		$35,981	$35,981	0.416	$14,986	
64		$43,571	$43,571	0.411	$17,897	
65		$2,981	$2,981	0.405	$1,208	
66		$43,571	$43,571	0.399	$17,406	
67		$2,981	$2,981	0.394	$1,174	
68		$43,571	$43,571	0.389	$16,928	
69		$2,981	$2,981	0.383	$1,142	
70		$76,571	$76,571	0.378	$28,934	
71		$2,981	$2,981	0.373	$1,111	
72		$43,571	$43,571	0.368	$16,013	
73		$2,981	$2,981	0.362	$1,080	
74		$43,571	$43,571	0.357	$15,574	
75		$2,981	$2,981	0.352	$1,051	**$2,115,372**